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Tablet-Based Cognitive Gaming Platform for seniors

2018-1-TR01-KA204-058258

IO2.A2 - Analysis of the current 3D games about cognitive skills development

Created by: EUROCY Innovations Ltd
with contributions from all project partners

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1. Introduction

1.1. Scope of work and methodology

This activity comprises a review of existing digital games that address cognitive skills development, training, exercising. Partners have performed a research on Google Play and App Store, where they found and collected useful information about related games.

Each partner focused more on resources in their languages or that have been produced closer to their countries, however, no formal restriction had been enforced since the objective was to collect and review as many existing resources as possible.

The result of this activity is the completion of all sections in this analysis document. Adhering to the contract, the responsibilities have been assigned as follows:

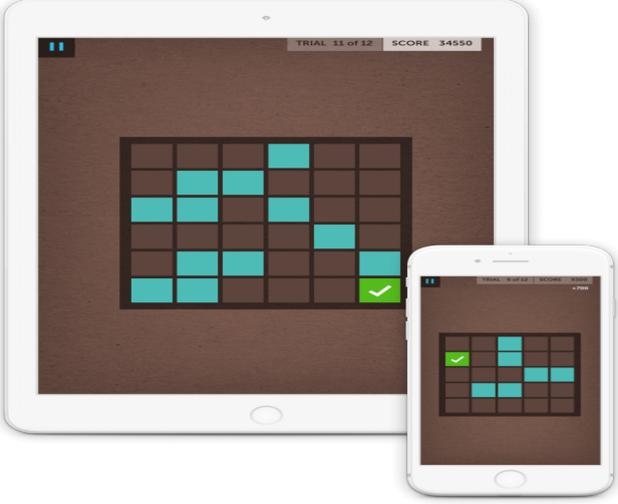
- Memory - P4 (Austria)
- Attention - P1 (Turkey)
- Visual perception - P2 (Belgium)
- Reasoning & planning - P3 (France)
- Processing speed - P5 (Cyprus)
- Sequential processing - P6 (Bulgaria)

The collected information will guide the design of the final games.

2. Review of games

2.1. Games focusing on “Memory”

<p>Photo</p>	
<p>Short description</p>	<p>Help Lydia the Librarian quickly find books for the kids. The kids' word bubbles tell you which books they want. But the books aren't labeled, so you need to memorize the location of each book!</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	
<p>URL/Link</p>	<p>https://www.memory-improvement-tips.com/lightning-librarian.html</p>
<p>Covered cognitive skills</p>	<p>Working memory – spatial recall — your ability to track location and position within an environment.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app</p>

Photo	
Short description	In Memory Matrix, you quickly memorize a group of tiles on a grid. That means remembering their location, and maybe even the shapes they create.
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/train/turbo/odp/1/play
Covered cognitive skills	Working memory – spatial recall — your ability to track location and position within an environment.
Languages	English
Cost	Free
Required software and/or hardware equipment	Windows app, Download from Google Play and Apple Store

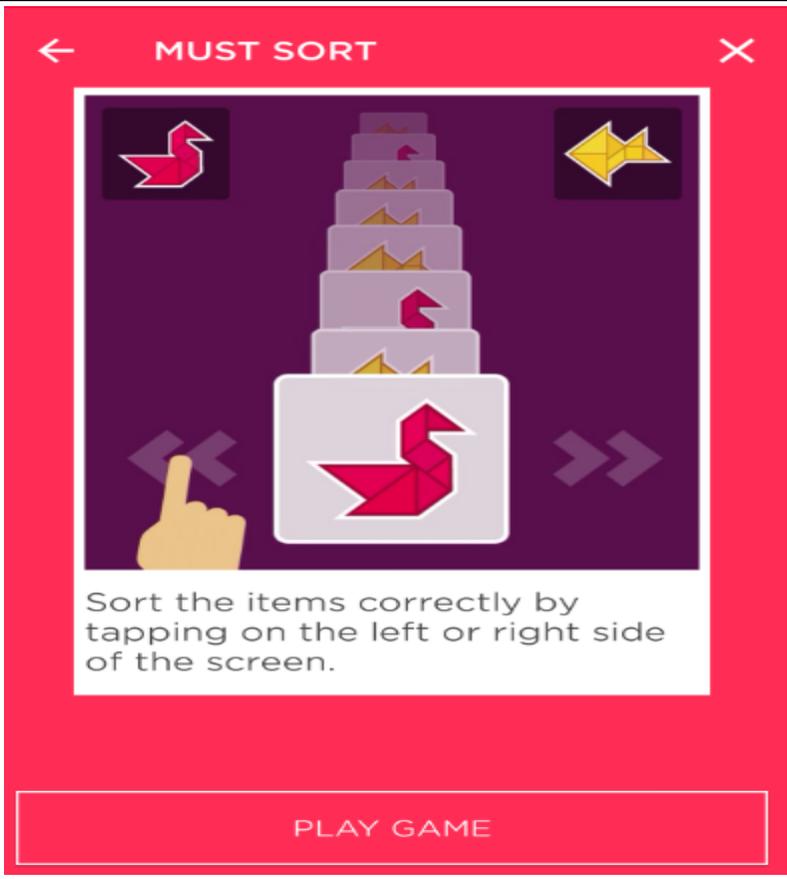
<p>Photo</p>	
<p>Short description</p>	<p>Peak is a free* app provides more than 40 fun games to help you exercise your brain. Peak is designed to improve your memory, sharpen your problem-solving skills and develop your mental agility.</p>
<p>Type of game</p>	<p><i>Sudoku</i> is an online 2D brain training game.</p>
<p>Provider</p>	
<p>URL/Link</p>	<p>https://www.peak.net/</p>
<p>Covered cognitive skills</p>	<p>Memory, problem solving skills</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Peak is free to download, but to get all of the features—such as the full selection of games, personalized goals and training, and advanced statistics—you need to subscribe. Your options are \$4.50 a month or \$36.88 a year</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>

Photo	
Short description	<p>All the the cards are arranged in columns and rows. You can change the number of cards on the board, and so the level of difficulty, thanks to the buttons located below the game. You can have 12, 16, 20, 30 or 36 cards</p> <p>You have to reconstruct the pairs of cards by turning them 2 by 2. If the cards turned face up are the same (a pair) you win and the pair disappears from the game otherwise the cards are automatically turned face down and you need to make a new try. Find all the pairs in the least moves and in a shortest time.</p> <p>You can play with different themes such as: the presidents of united state, butterflies, dog breeds, face memory, golf and much more</p>
Type of game	2D
Provider	Memozor
URL/Link	https://www.memozor.com/memory-games
Covered cognitive skills	Memory
Languages	English and French
Cost	Free online



Required software and/or hardware equipment	Windows app
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Photo	
Short description	<p>You get a few seconds to look at the face of a criminal in Velma's memory. Then you recreate the face for the police sketch artist for points. On the sketch screen, click the facial feature (Eyes, Nose, Mouth, Hair, Facial Hair, Ears) that you remember.</p> <p>If the sketch doesn't match the criminal's face, you get a few more chances to get it right. Then you try to pick the criminal out of a lineup.</p> <p>Pick out the right criminal to get points. Try to send as many criminals to jail as you can!</p>
Type of game	2D
Provider	
URL/Link	https://www.memory-improvement-tips.com/velma-vision.html
Covered cognitive skills	Working memory – processing speed and attention
Languages	English
Cost	Free
Required software and/or hardware equipment	Windows app

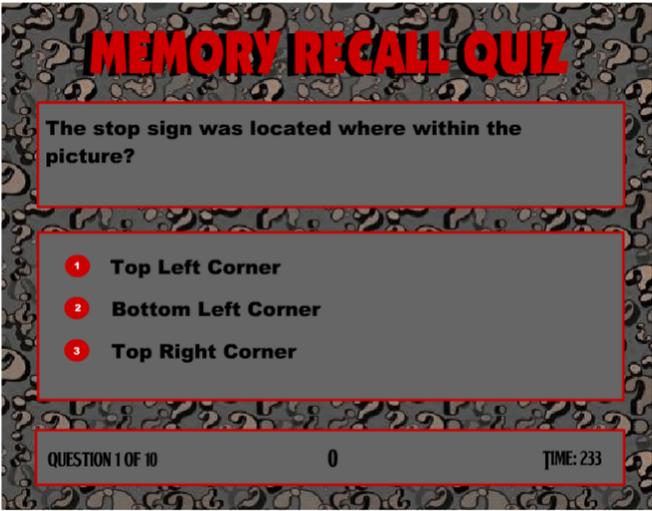
<p>Photo</p>	
<p>Short description</p>	<p>Exercise your memory by delivering bags to hotel guests. you'll need to keep track of your ever-changing inventory as you pick up and drop off the right set of bags to your hotel guests. As you get better, your job will challenge your memory updating skills to keep track of more luggage and more types of luggage</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/memory-serves/</p>
<p>Covered cognitive skills</p>	<p>Working memory. It is used for temporarily storing and manipulating informations</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>

<p>Photo</p>	
<p>Short description</p>	<p>In Memory Match, you must quickly determine whether a flashcard symbol matches the one presented 2 times previously.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/memory-match/</p>
<p>Covered cognitive skills</p>	<p>Working memory. Memorizing and comparing the symbols challenges your working memory. This game also makes you continually update your working memory with new information.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



<p>Photo</p>	<p>The screenshot shows a user interface for a cognitive training game. On the left, there is a vertical level bar labeled 'Nivå' with numbers 1 through 7. The current level is indicated by a red line at level 4. In the center is a 4x4 grid labeled 'Rutnät' (Sudoku grid) with one cell highlighted in orange. On the right, there are settings for 'Rekord' (Record) showing 'Högsta nivå 4,1' and 'Medelnivå 3,8', and 'Ljudvolym' (Volume) sliders for 'Ljudeffekter' and 'Tal'. At the bottom, there is a 'Kvar idag' (Remaining today) progress bar and buttons for 'Avbryt' (Cancel) and 'Instruktion' (Instructions).</p>
<p>Short description</p>	<p>This program has an interface specifically designed for the older age-range, and like the other programs feature exercises that automatically adjust in difficulty to expand working memory capacity.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Cogmend</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/sudoku-puzzle/l/en</p>
<p>Covered cognitive skills</p>	<p>Working memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Download from google play and apple store</p>



Photo	
Short description	You see twelve traffic signals, you study them for 45 seconds, and then you have to answer a series of questions about them
Type of game	Multiple type questions
Provider	
URL/Link	http://easymemoryimprovement101.com/memory-games/memory-recall-quiz/
Covered cognitive skills	Memory
Languages	English
Cost	Free online
Required software and/or hardware equipment	Windows app



<p>Photo</p>	
<p>Short description</p>	<p>Take a stroll down Memory Lane, a series of 10 random, highly forgettable events. As you stroll, try to remember the decisions that lead you safely to the end of your journey.</p>
<p>Type of game</p>	<p>Multiple type questions</p>
<p>Provider</p>	
<p>URL/Link</p>	<p>https://braincurls.com/ml/memLane.html</p>
<p>Covered cognitive skills</p>	<p>Memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free online</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app</p>



<p>Photo</p>	
<p>Short description</p>	<p>The exercise 'Memobox' requires you to remember the amount of colored balls going in and out of several different boxes. Focus, memory, and processing capacities are key here. Memobox is one of the activities that Neuronation provides to train your memory skills.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Neuronation</p>
<p>URL/Link</p>	<p>https://www.neuronation.com/</p>
<p>Covered cognitive skills</p>	<p>Working memory: You need working memory to remember information and keep several information simultaneously at your disposal.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>From 4.79 euro – 350.00 euro per item</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play</p>





<p>Photo</p>	
<p>Short description</p>	<p>In Pinball Recall, you must memorize the locations of several bumpers before they disappear. You then visualize how the ball will bounce off them, and determine where it will go.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Working memory. This task requires more than simple memorization: you must also analyze your temporary memories in order to answer correctly.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>

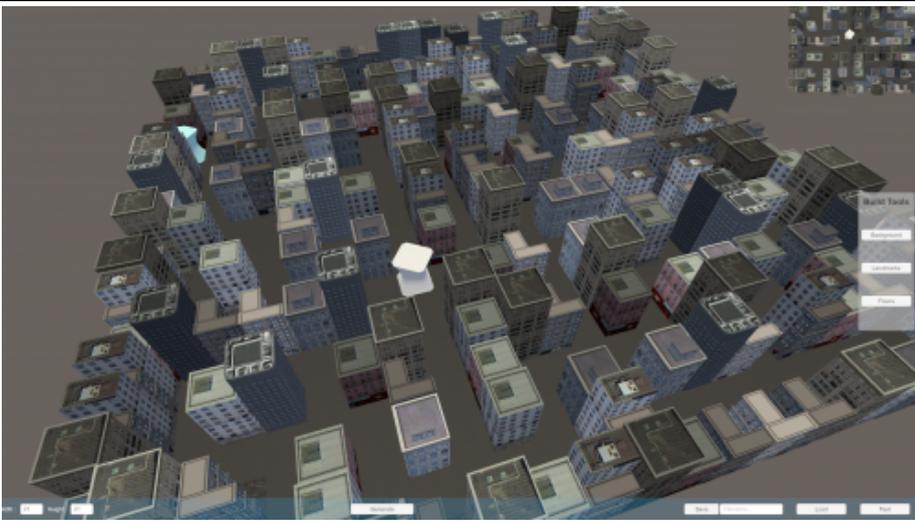




<p>Photo</p>	
<p>Short description</p>	<p>Keep choosing unique ocean treasures from a tide pool as more and more items wash up. Objects will be more difficult to tell apart as they accumulate in the tide pool -- so you'll need to remember more details about each item on your growing list of treasures as you spend more time at the shore.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/tidal-treasures/</p>
<p>Covered cognitive skills</p>	<p>Working memory is used for temporarily storing and manipulating information.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>

<p>Photo</p>	
<p>Short description</p>	<p><i>A custom-designed, closed-loop video game that challenges an individual to engage rapidly and accurately in a high-interference 3D environment.</i></p> <p><i>In the game, which was developed by the UCSF researchers, participants race a car around a winding track while a variety of road signs pop up. Drivers are instructed to keep an eye out for a specific type of sign, while ignoring all the rest, and to press a button whenever that particular sign appears.</i></p> <p><i>The need to switch rapidly from driving to responding to the signs – i.e. multitasking – generates interference in the brain that undermines performance.</i></p>
<p>Type of game</p>	<p>3D video game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/#neuroracer</p>
<p>Covered cognitive skills</p>	<p>Speed Information Processing Skills, multitasking skills, attention skills, working memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app. 3D video platform</p>

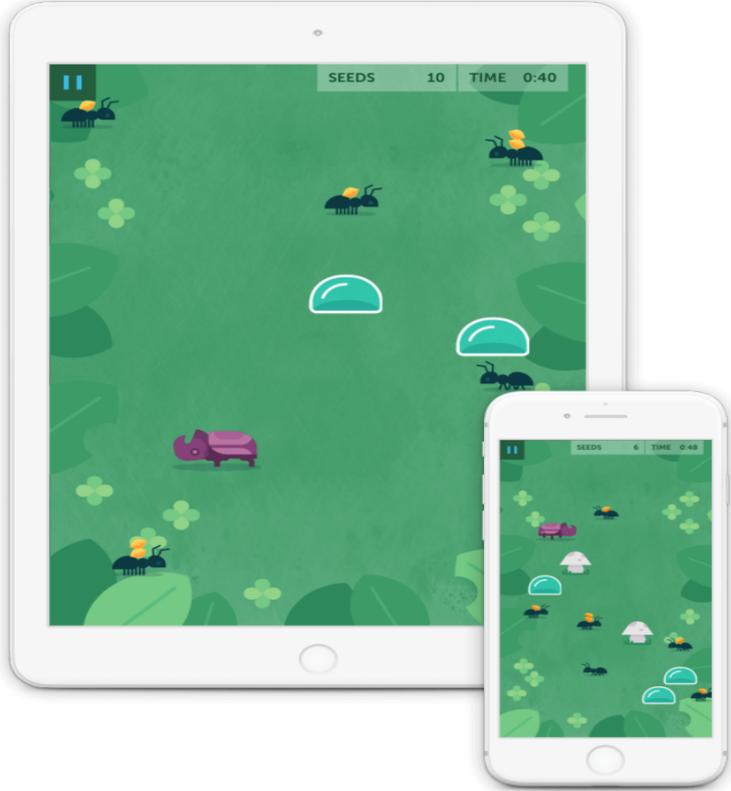


<p>Photo</p>	
<p>Short description</p>	<p>The Labyrinth virtual reality computer game immerses the user in learning new neighborhoods, and then challenges the user to find the most efficient route between landmarks. Along the way, demands increase to attend to details about new neighborhood landmarks.</p>
<p>Type of game</p>	<p>3D virtual reality computer game</p>
<p>Provider</p>	<p>Neuroscape</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/</p>
<p>Covered cognitive skills</p>	<p>Planning and logical reasoning, attention, memory</p>
<p>Languages</p>	<p>eng</p>
<p>Cost</p>	<p></p>
<p>Required software and/or hardware equipment</p>	<p>Windows</p>

2.2. Games focusing on “Attention”

<p>Photo</p>	
<p>Short description</p>	<p>In this game, your task is to fill multiple coffee orders at once. The more orders you take on, the harder it becomes to fill them successfully. This task challenges divided attention — your ability to simultaneously respond to multiple tasks</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/trouble-brewing/</p>
<p>Covered cognitive skills</p>	<p>Attention – divided attention: refers to the ability to simultaneously respond to multiple tasks or task demands.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



Photo	
Short description	Train your divided attention skills by preventing ant collisions.
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/en/brain-games/pinball-recall/
Covered cognitive skills	Divided attention: refers to the ability to simultaneously respond to multiple tasks or task demands
Languages	English
Cost	11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games
Required software and/or hardware equipment	Windows app, Download from Google Play and Apple Store

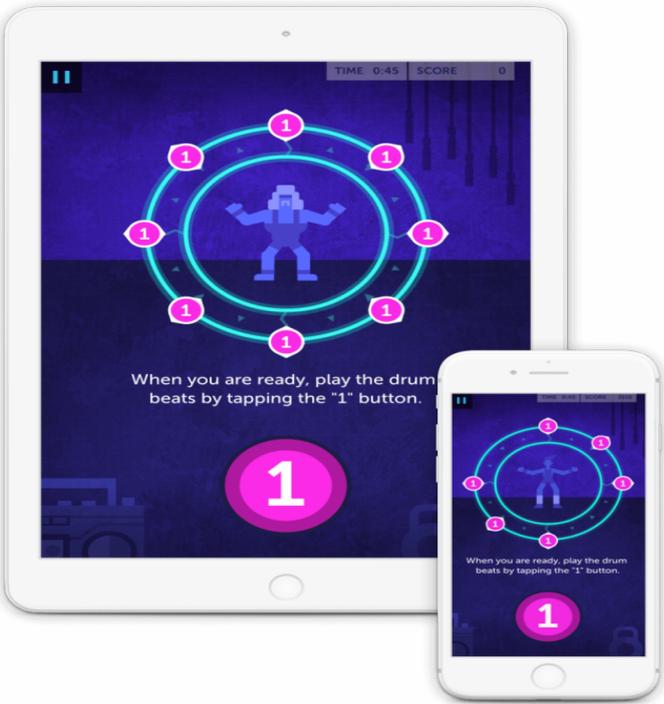
<p>Photo</p>	
<p>Short description</p>	<p>Lost in Migration exercises your attention abilities. can boost your focus, helping you avoid distraction and improve productivity at work.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Selective attention: The ability to focus on relevant information while ignoring irrelevant distractions</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



<p>Photo</p>	
<p>Short description</p>	<p>Your task is to guide an increasing number of trains to their stations. You must divide your attention to guide them all simultaneously. Attention is a limited resource that can track only so much information at once — so you must use your attention efficiently by planning ahead.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Divided attention refers to the ability to simultaneously respond to multiple tasks or task demands.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>

<p>Photo</p>	
<p>Short description</p>	<p>In Playing Koi, you must feed a school of fish, but there's a catch: the fish move around the pond, and you can feed each fish only once. That means you must keep track of every fish you feed.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>divided attention — your ability to simultaneously respond to multiple tasks.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



<p>Photo</p>	
<p>Short description</p>	<p>Exercise your rhythm skills by playing the drums on your keyboard.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Attention – Timing skill: is the ability to synchronize activities and accurately keep time.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



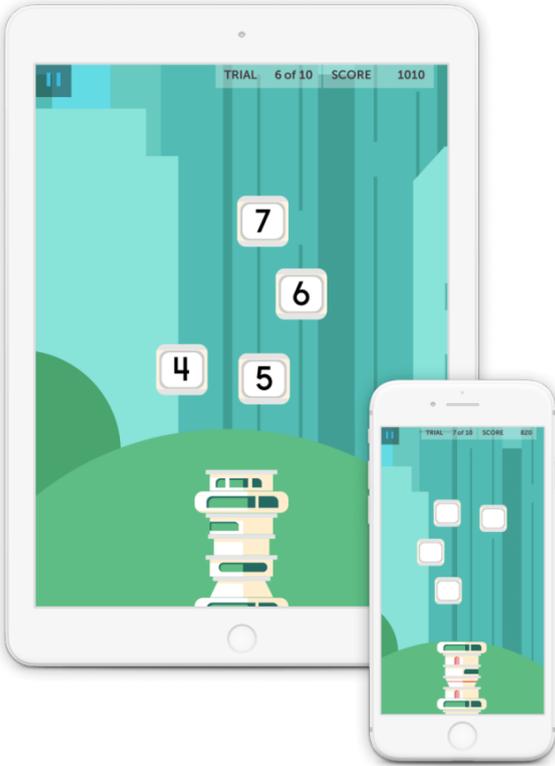
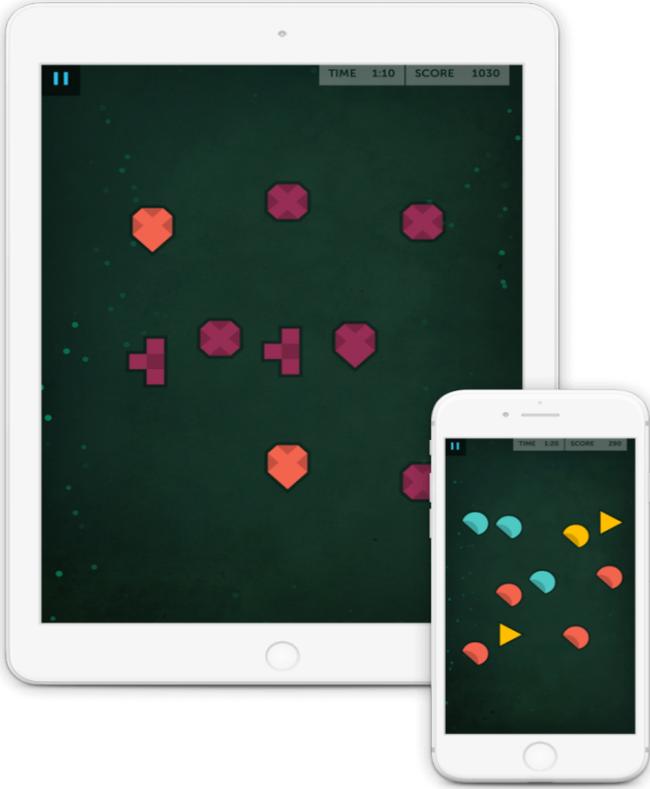
<p>Photo</p>	
<p>Short description</p>	<p>Skyrise exercises visual attention. This type of training can help you quickly and accurately perceive elements of the world around you.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Visual attention – more specifically the Field of view: refers to the area over which you can absorb visual information without moving your eyes.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



Photo	
Short description	Quickly scan for the unique object among a constellation of items that have similar shape, color, motion and texture. Differences among the objects become more subtle as you level-up.
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/en/brain-games/pinball-recall/
Covered cognitive skills	Attention – Selective attention: The ability to focus on relevant information while ignoring irrelevant distractions
Languages	English
Cost	11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games
Required software and/or hardware equipment	Windows app, Download from Google Play and Apple Store



<p>Photo</p>	
<p>Short description</p>	<p><i>A custom-designed, closed-loop video game that challenges an individual to engage rapidly and accurately in a high-interference 3D environment.</i></p> <p><i>In the game, which was developed by the UCSF researchers, participants race a car around a winding track while a variety of road signs pop up. Drivers are instructed to keep an eye out for a specific type of sign, while ignoring all the rest, and to press a button whenever that particular sign appears.</i></p> <p><i>The need to switch rapidly from driving to responding to the signs – i.e. multitasking – generates interference in the brain that undermines performance.</i></p>
<p>Type of game</p>	<p>3D video game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/#neuroracer</p>
<p>Covered cognitive skills</p>	<p>Speed Information Processing Skills, multitasking skills, attention skills, working memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app. 3D video platform</p>





<p>Photo</p>	
<p>Short description</p>	<p><i>MediTrain integrates the principles of concentrative meditation with the video game mechanics of adaptivity and feedback to create a powerful cognitive training game.</i></p> <p><i>MediTrain integrates the principles of concentrative meditation with the video game mechanics of adaptivity and feedback to create a powerful cognitive training game</i></p>
<p>Type of game</p>	<p>3D video game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/</p>
<p>Covered cognitive skills</p>	<p>attention skills</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app. 3D video platform</p>



Short description	This activity consists of choosing the window which is the last to light up.
Type of game	2D
Provider	NeuronUp
URL/Link	https://www.neuronup.com/el/news/257/game-for-slow-processing-speed
Covered cognitive skills	Processing Speed, Sustained attention
Languages	English
Cost	60 Euro/m, 720 euro/annually
Required software and/or hardware equipment	Windows app.

Short description	The patient has to find, as quickly as possible, the repeated element.
Type of game	2D
Provider	NeuronUp
URL/Link	https://www.neuronup.com/el/news/257/game-for-slow-processing-speed
Covered cognitive skills	Processing Speed, Sustained attention
Languages	English
Cost	60 Euro/m, 720 euro/annually
Required software and/or hardware equipment	Windows app.



Photo	
Short description	<p><i>Virtual Attention leverages evolving virtual reality (VR) technologies to train individuals to broaden the distribution of their temporal (time) and spatial (space) attention—skills that are critical for real-world activities such as driving.</i></p> <p><i>Using industries highest-level head-mounted displays and leveraging recent advancements in VR development technology, participants are immersed in an interactive 3D world for this unique attention training experience.</i></p>
Type of game	3D
Provider	Gazzaley Lab
URL/Link	https://neuroscape.ucsf.edu/technology/#neuroracer
Covered cognitive skills	<i>spatial and temporal attention abilities</i>
Languages	English
Cost	
Required software and/or hardware equipment	Windows app.



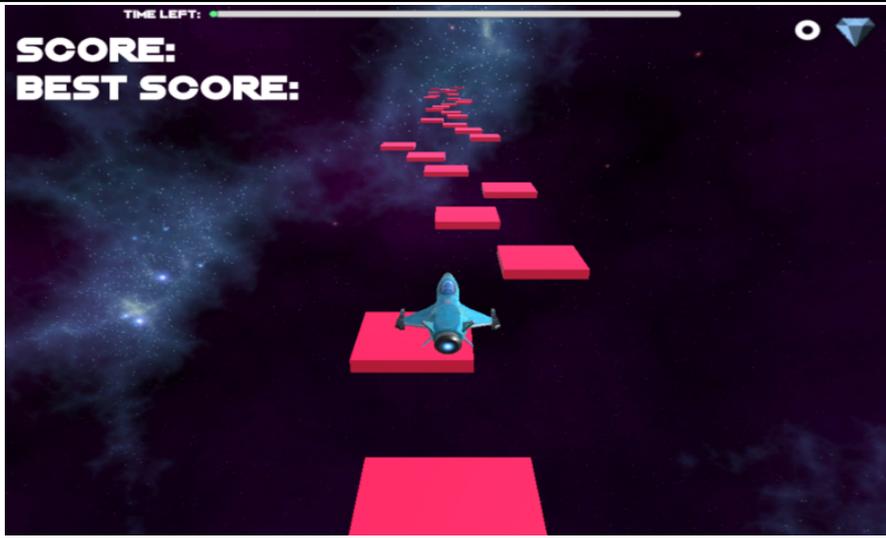
<p>Photo</p>	
<p>Short description</p>	<p>Boing was designed to enhance visual-motor skills and processing speed by practicing thinking and responding quickly. These functions are critical for many other important cognitive abilities, such as attention and working memory. The goal of Boing is to improve broad aspects of cognitive functioning by developing underlying visual-motor and processing speed skills.</p>
<p>Type of game</p>	<p>A 3D mobile game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/</p>
<p>Covered cognitive skills</p>	<p>Attention, Speed Information Processing Skills, visual processing skills,</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p></p>
<p>Required software and/or hardware equipment</p>	<p>Windows app.</p>



Photo	
Short description	<p>You get a few seconds to look at the face of a criminal in Velma's memory. Then you recreate the face for the police sketch artist for points. On the sketch screen, click the facial feature (Eyes, Nose, Mouth, Hair, Facial Hair, Ears) that you remember.</p> <p>If the sketch doesn't match the criminal's face, you get a few more chances to get it right. Then you try to pick the criminal out of a lineup.</p> <p>Pick out the right criminal to get points. Try to send as many criminals to jail as you can!</p>
Type of game	2D
Provider	
URL/Link	https://www.memory-improvement-tips.com/velma-vision.html
Covered cognitive skills	Working memory – processing speed and attention
Languages	English
Cost	Free
Required software and/or hardware equipment	Windows app



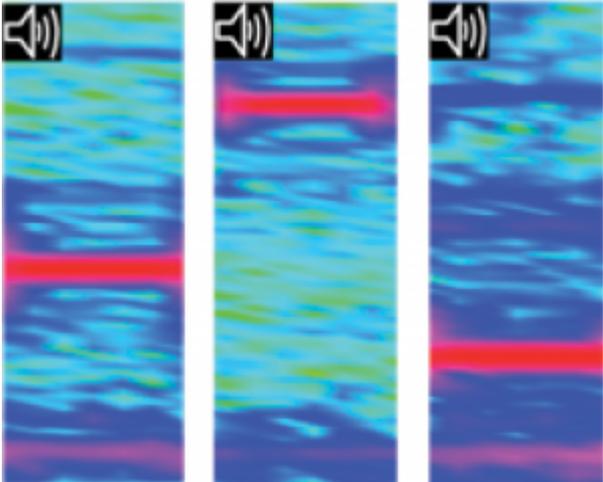
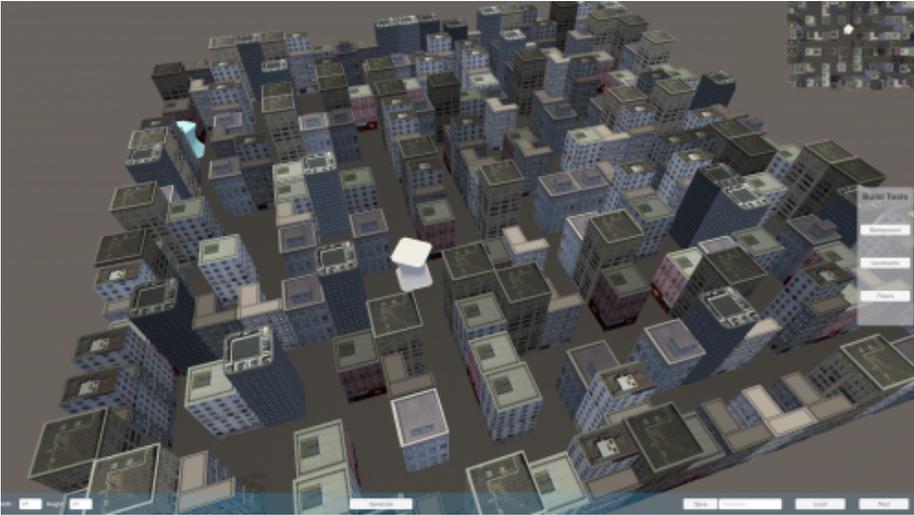
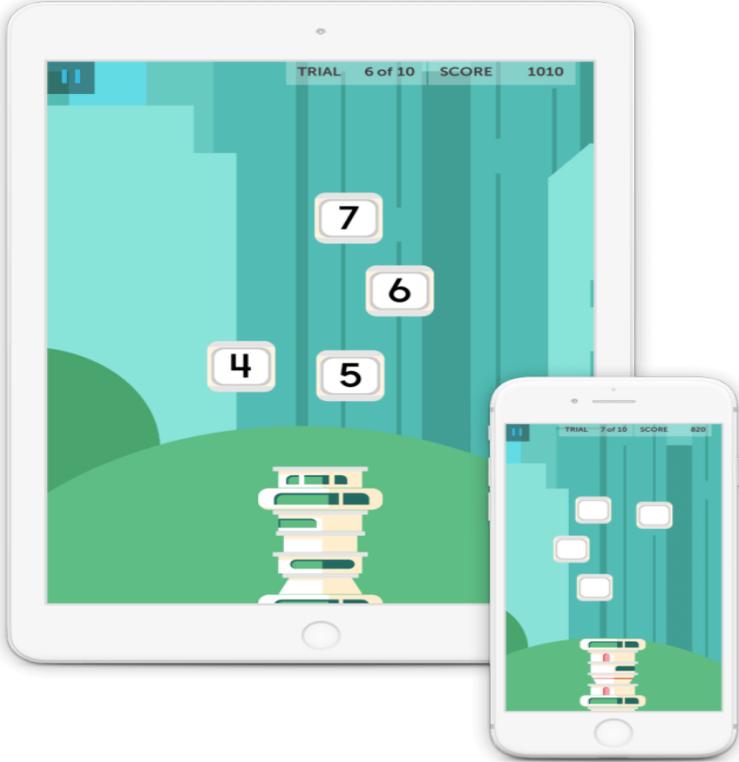
Photo	
Short description	<p>Beep Seeker was designed to improve the ability to filter distracting information, a critical skill for high-level performance across multiple domains.</p> <p>Game play involves the detection of auditory target in the presence of auditory distractors. The game's difficulty adjusts based on the participant's performance.</p>
Type of game	A mobile game
Provider	Gazzaley Lab
URL/Link	https://neuroscape.ucsf.edu/technology/
Covered cognitive skills	Attention; The game builds the ability to ignore distractions,
Languages	English
Cost	
Required software and/or hardware equipment	Windows app.



Photo	
Short description	The Labyrinth virtual reality computer game immerses the user in learning new neighborhoods, and then challenges the user to find the most efficient route between landmarks. Along the way, demands increase to attend to details about new neighborhood landmarks.
Type of game	3D virtual reality computer game
Provider	Neuroscape
URL/Link	https://neuroscape.ucsf.edu/technology/
Covered cognitive skills	Planning and logical reasoning, attention, memory
Languages	eng
Cost	
Required software and/or hardware equipment	Windows



2.3. Games focusing on “Visual Perception”

<p>Photo</p>	
<p>Short description</p>	<p>Skyrise exercises visual attention. This type of training can help you quickly and accurately perceive elements of the world around you.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Visual perception - attention – more specifically the Field of view: refers to the area over which you can absorb visual information without moving your eyes.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>

<p>Photo</p>	
<p>Short description</p>	<p>Quickly scan for the unique object among a constellation of items that have similar shape, color, motion and texture. Differences among the objects become more subtle as you level-up.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Visual perception and attention – Selective attention: The ability to focus on relevant information while ignoring irrelevant distractions</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>

Photo	
Short description	<p>'Color Craze' is a challenging exercise that gives you more control over automatic actions of yours. You have to either click on a color or a symbol, depending on what is being sought. The exercise is designed to work against your impulses, so you will train your ability to resist your impulses.</p> <p>Color Craze is one of the many activities you can do using NeuroNation app to train your perception, attention and multitasking skills.</p>
Type of game	2D
Provider	NeuroNation
URL/Link	https://www.neuronation.com/
Covered cognitive skills	Visual perception and attention – 'Perception' is designed to train your sensory acuity. This makes you process information faster, and react quickly to changing situations
Languages	English
Cost	
Required software and/or hardware equipment	Windows app, Download from Google Play





<p>Photo</p>	
<p>Short description</p>	<p><i>A custom-designed, closed-loop video game that challenges an individual to engage rapidly and accurately in a high-interference 3D environment.</i></p> <p><i>In the game, which was developed by the UCSF researchers, participants race a car around a winding track while a variety of road signs pop up. Drivers are instructed to keep an eye out for a specific type of sign, while ignoring all the rest, and to press a button whenever that particular sign appears.</i></p> <p><i>The need to switch rapidly from driving to responding to the signs – i.e. multitasking – generates interference in the brain that undermines performance.</i></p>
<p>Type of game</p>	<p>3D video game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/#neuroracer</p>
<p>Covered cognitive skills</p>	<p>Visual perception, Speed Information Processing Skills, multitasking skills, attention skills, working memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app. 3D video platform</p>



<p>Photo</p>	
<p>Short description</p>	<p>Boing was designed to enhance visual-motor skills and processing speed by practicing thinking and responding quickly. These functions are critical for many other important cognitive abilities, such as attention and working memory. The goal of Boing is to improve broad aspects of cognitive functioning by developing underlying visual-motor and processing speed skills.</p>
<p>Type of game</p>	<p>A 3D mobile game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/#neuroracer</p>
<p>Covered cognitive skills</p>	<p>Visual perception, Speed Information Processing Skills</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p></p>
<p>Required software and/or hardware equipment</p>	<p>Windows app.</p>





<p>Photo</p>	
<p>Short description</p>	<p>To advance in the game, we will have to line up three or more equal pieces, being able to exchange only the position of two adjacent pieces. However, as the level of complexity of this mind training game increases, the cognitive demands will increase.</p>
<p>Type of game</p>	<p><i>Twist It</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/twist-it</p>
<p>Covered cognitive skills</p>	<p>Visual Processing, Attention, Sequencing, Planning,</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>





<p>Photo</p>	
<p>Short description</p>	<p>The objective of the game is to find the hinted words in a specific time</p>
<p>Type of game</p>	<p><i>Word Quest Twist</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/word-quest</p>
<p>Covered cognitive skills</p>	<p>Visual Processing, Attention, Sequencing, Planning,</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>



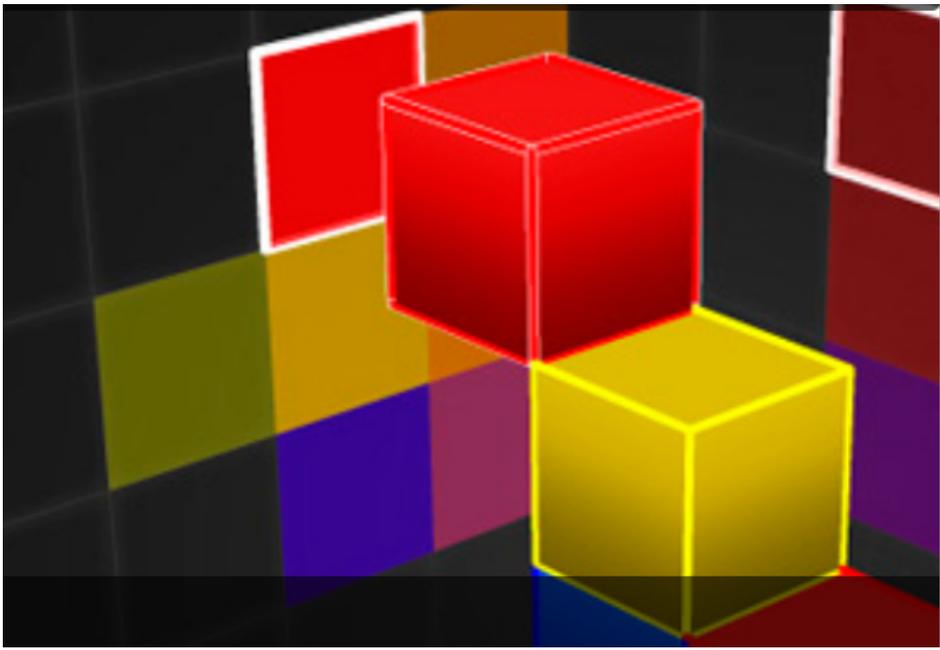
Photo	
Short description	The aim is to build 3D shapes using cubes.
Type of game	<i>Star Architect</i> is an online 3D brain training game .
Provider	CogniFit
URL/Link	https://www.cognifit.com/aplicaciones/html5/brain/game/blockbuilder/l/en
Covered cognitive skills	Visual perception, Attention, Sequencing, Planning
Languages	English
Cost	Free
Required software and/or hardware equipment	Online , android app



Photo	
Short description	<p>You get a few seconds to look at the face of a criminal in Velma's memory. Then you recreate the face for the police sketch artist for points. On the sketch screen, click the facial feature (Eyes, Nose, Mouth, Hair, Facial Hair, Ears) that you remember.</p> <p>If the sketch doesn't match the criminal's face, you get a few more chances to get it right. Then you try to pick the criminal out of a lineup.</p> <p>Pick out the right criminal to get points. Try to send as many criminals to jail as you can!</p>
Type of game	2D
Provider	
URL/Link	https://www.memory-improvement-tips.com/velma-vision.html
Covered cognitive skills	Visual processing, working memory, processing speed and attention
Languages	English
Cost	Free
Required software and/or hardware equipment	Windows app

<p>Photo</p>	
<p>Short description</p>	<p>The aim is to form words by rearranging the birds. The faster you find the word the higher is the score you get.</p>
<p>Type of game</p>	<p><i>Words Birds</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/words-birds/l/en</p>
<p>Covered cognitive skills</p>	<p>Visual perception, Attention, Sequencing, Planning</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>



<p>Photo</p>	
<p>Short description</p>	<p>The goal is to fill in all the cells of a grid with digits as fast as possible. The number of the digits depends on the level.</p>
<p>Type of game</p>	<p><i>Sudoku</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/sudoku-puzzle/1/en</p>
<p>Covered cognitive skills</p>	<p>Visual perception, Attention, Working memory, Sequencing, Planning,</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>



2.4. Games focusing on “Reasoning and Planning”

<p>Photo</p>	
<p>Short description</p>	<p>Exercise your logical reasoning by planting seeds in the right order.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Logical reasoning: is the ability to combine multiple cognitive processes to recognize patterns, draw conclusions, and make decisions.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



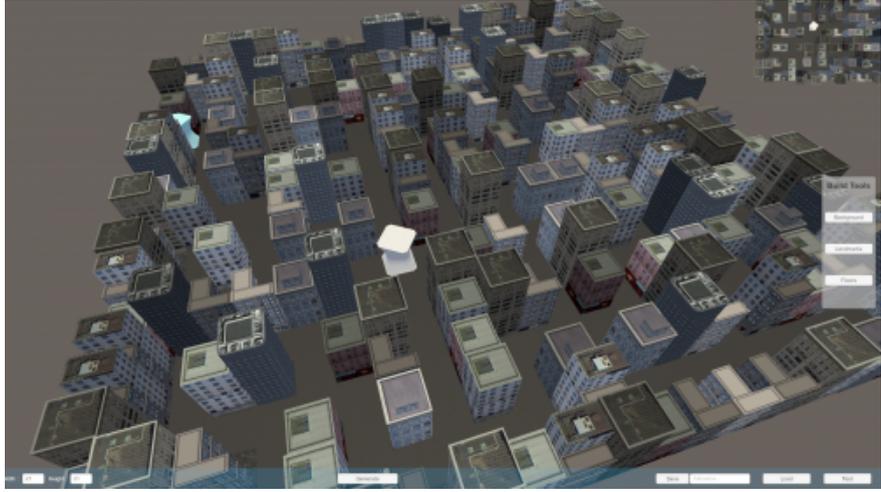
<p>Photo</p>	
<p>Short description</p>	<p>In Pet Detective, you must rescue all the lost pets, which means using your planning skills to find the most efficient route.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Planning skills: Planning involves thinking ahead, evaluating options, and choosing the best course of action</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>





<p>Photo</p>	
<p>Short description</p>	<p>Exercise your planning skills by finding the route to buried treasure.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/pinball-recall/</p>
<p>Covered cognitive skills</p>	<p>Planning skills: involves thinking ahead, evaluating options, and choosing the best course of action.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



Photo	
Short description	The Labyrinth virtual reality computer game immerses the user in learning new neighborhoods, and then challenges the user to find the most efficient route between landmarks. Along the way, demands increase to attend to details about new neighborhood landmarks.
Type of game	3D virtual reality computer game
Provider	Neuroscape
URL/Link	https://neuroscape.ucsf.edu/technology/
Covered cognitive skills	Planning and logical reasoning, attention, memory
Languages	eng
Cost	
Required software and/or hardware equipment	Windows

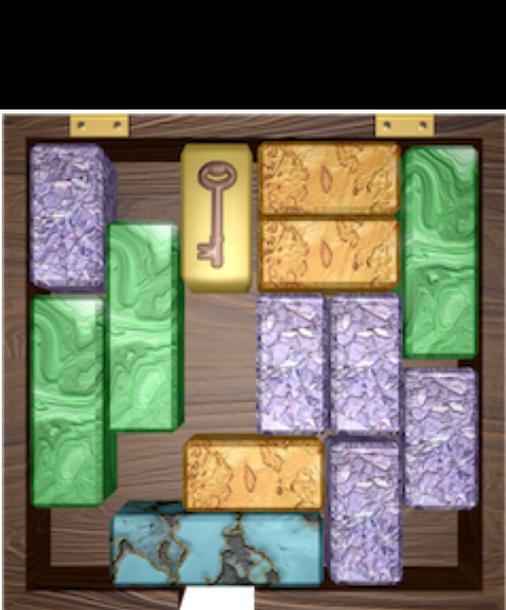


<p>Photo</p>	
<p>Short description</p>	<p>In the exercise 'Solitaria' you need to quickly recognize patterns, and identify the one object that is different to all the others. Solitaria is one of the activities for reasoning skills of the neuronation training program The reasoning category of the training, trains your ability to recognise patterns, meaning the relationship of one object to a group of objects. It challenges your concentration, processing capabilities and logical thinking</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Neuronation</p>
<p>URL/Link</p>	<p>https://www.neuronation.com/</p>
<p>Covered cognitive skills</p>	<p>Reasoning skills, processing speed, attention</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>From 4.79 euro – 350.00 euro per item</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play</p>





<p>Photo</p>	 <p>PRACTICE SPATIAL AWARENESS BY SOLVING INTERACTIVE EXERCISES!</p>
<p>Short description</p>	<p>In Piko's Blocks, the learner builds 3D structures based on presented exercises. Player observes and manipulates self-made 3D objects to develop three-dimensional thinking. Piko's Blocks has been developed in cooperation with occupational therapists and teachers.</p>
<p>Type of game</p>	<p>3D game</p>
<p>Provider</p>	<p>Piko's Blocks</p>
<p>URL/Link</p>	<p>http://pikosblocks.com/pikos-blocks/</p>
<p>Covered cognitive skills</p>	<p>Planning and logical reasoning, spatial reasoning, problem solving</p>
<p>Languages</p>	<p>eng</p>
<p>Cost</p>	<p></p>
<p>Required software and/or hardware equipment</p>	<p>iOS, Android, Windows</p>

<p>Photo</p>	
<p>Short description</p>	<p>A simple and addictive puzzle. An entertaining gameplay with colorful graphics will keep your brain focused for hundreds of hours. The goal in each level is to unblock a key item by sliding the others with a minimal number of moves.</p>
<p>Type of game</p>	<p>3D game</p>



Provider	Radle Games
URL/Link	http://radle.net/
Covered cognitive skills	Logical reasoning, problem solving
Languages	Eng, French
Cost	
Required software and/or hardware equipment	iOS, Android, Windows

2.5. Games focusing on “Information Processing Speed”

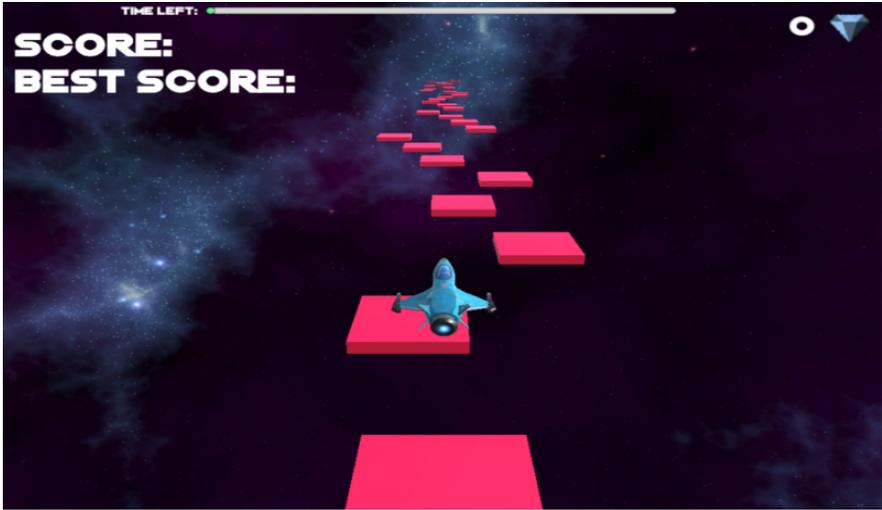
<p>Photo</p>	
<p>Short description</p>	<p>The patient has to select as quickly as possible the characteristics of the squares to go forward, avoiding being caught by the guard. And beware, if the patient fails, the guard runs faster!</p> <p>The higher their level is, the more characteristics they have to select:</p> <ul style="list-style-type: none"> • Basic level: to move to the next square select the car model. • Easy level: to move to the next square select the car model and background color. • Medium level: to move to the next square select the car model, background color and letter. • Difficult level: to move to the next square select the car model, background color, letter and number.
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>NeuronUp</p>
<p>URL/Link</p>	<p>https://www.neuronup.com/el/news/257/game-for-slow-processing-speed</p>
<p>Covered cognitive skills</p>	<p>Processing Speed</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>60 Euro/m, 720 euro/annually</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app.</p>



Short description	This activity consists of choosing the window which is the last to light up.
Type of game	2D
Provider	NeuronUp
URL/Link	https://www.neuronup.com/el/news/257/game-for-slow-processing-speed
Covered cognitive skills	Processing Speed, Sustained attention
Languages	English
Cost	60 Euro/m, 720 euro/annually
Required software and/or hardware equipment	Windows app.

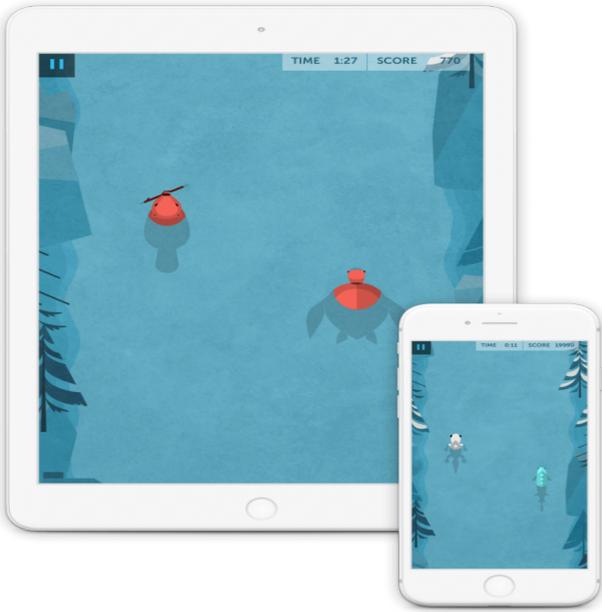
Short description	The patient has to find, as quickly as possible, the repeated element.
Type of game	2D
Provider	NeuronUp
URL/Link	https://www.neuronup.com/el/news/257/game-for-slow-processing-speed
Covered cognitive skills	Processing Speed, Sustained attention
Languages	English
Cost	60 Euro/m, 720 euro/annually
Required software and/or hardware equipment	Windows app.



<p>Photo</p>	
<p>Short description</p>	<p>Boing was designed to enhance visual-motor skills and processing speed by practicing thinking and responding quickly. These functions are critical for many other important cognitive abilities, such as attention and working memory. The goal of Boing is to improve broad aspects of cognitive functioning by developing underlying visual-motor and processing speed skills.</p>
<p>Type of game</p>	<p>A 3D mobile game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/#neuroracer</p>
<p>Covered cognitive skills</p>	<p>Speed Information Processing Skills, visual processing skills, attention</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p></p>
<p>Required software and/or hardware equipment</p>	<p>Windows app.</p>

<p>Photo</p>	
<p>Short description</p>	<p>In Highway Hazards, you quickly dodge obstacles in a race through the desert — tumbleweeds, other drivers, and more..</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/highway-hazards/</p>
<p>Covered cognitive skills</p>	<p>These rapid maneuvers challenge your information processing skills: your ability to process and analyze incoming information</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app,Download from Google Play and Apple Store</p>



Photo	
Short description	In River Ranger, you must quickly spot animals in a river, and remember which animals you saw previously.
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/en/brain-games/river-ranger/
Covered cognitive skills	This fast-paced game challenges information processing skills, your ability to rapidly process and analyze information. Information processing is the initial identification and analysis of incoming sensory input.
Languages	English
Cost	11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games
Required software and/or hardware equipment	Windows app, Download from Google Play and Apple Store

<p>Photo</p>	
<p>Short description</p>	<p>Guide a penguin through a maze. When the maze rotates, you must rotate your mental map of the maze and recalibrate the directions to get to the fish.</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/penguin-pursuit/</p>
<p>Covered cognitive skills</p>	<p>Spatial orientation, also known as sense of direction, involves being aware of the surrounding environment.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app, Download from Google Play and Apple Store</p>



Photo	
Short description	<p>You get a few seconds to look at the face of a criminal in Velma's memory. Then you recreate the face for the police sketch artist for points. On the sketch screen, click the facial feature (Eyes, Nose, Mouth, Hair, Facial Hair, Ears) that you remember.</p> <p>If the sketch doesn't match the criminal's face, you get a few more chances to get it right. Then you try to pick the criminal out of a lineup.</p> <p>Pick out the right criminal to get points. Try to send as many criminals to jail as you can!</p>
Type of game	2D
Provider	
URL/Link	https://www.memory-improvement-tips.com/velma-vision.html
Covered cognitive skills	Working memory – processing speed and attention
Languages	English
Cost	Free

Required software and/or hardware equipment	Windows app
Photo	
Short description	In this game, you fit the last item into an already filled suitcase. That means you must imagine what the suitcase would look like when folded. This mental folding challenges visualization — your ability to imagine how objects fit together and interact.
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/en/brain-games/speed-pack/
Covered cognitive skills	Information Processing speed – Visualization: the ability to manipulate or imagine the interaction of objects in your mind.
Languages	English

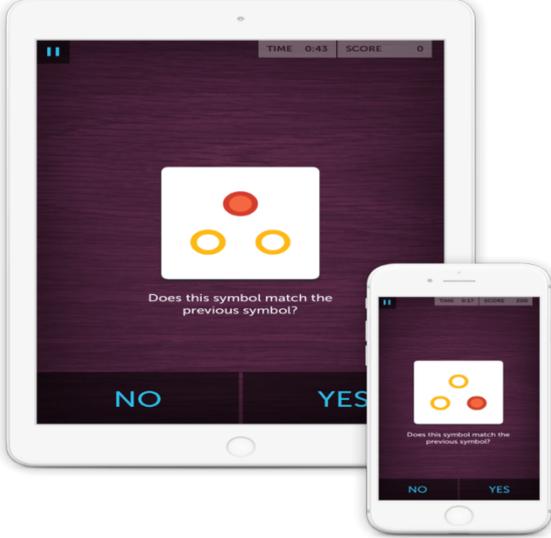


Cost	11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games
Required software and/or hardware equipment	Windows app, Download from Google Play and Apple Store

Photo	
Short description	In this game, you evenly divide a pile of seeds. To do this quickly, you'll need your subitization skills.
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/en/brain-games/pinball-recall/
Covered cognitive skills	Information Processing Speed - Subitization is your ability to quickly discern the number of items in a small group without having to count.
Languages	English
Cost	11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games



Required software and/or hardware equipment	Windows app, Download from Google Play and Apple Store
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Photo	
Short description	Spatial Speed Match is an information-processing game with a strong spatial component
Type of game	2D
Provider	Lumosity
URL/Link	https://www.lumosity.com/en/brain-games/spatial-speed-match/
Covered cognitive skills	Information Processing skills: Improving information processing can help speed up other cognitive processes, helping you to think faster and clearer.
Languages	English
Cost	11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games
Required software and/or hardware equipment	Windows app,Download from Google Play and Apple Store



<p>Photo</p>	
<p>Short description</p>	<p>Making you consider shapes and colors individually in a fast-paced game</p>
<p>Type of game</p>	<p>2D</p>
<p>Provider</p>	<p>Lumosity</p>
<p>URL/Link</p>	<p>https://www.lumosity.com/en/brain-games/speed-match-overdrive/</p>
<p>Covered cognitive skills</p>	<p>Information Processing Speed: is the initial identification and analysis of incoming sensory input.</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>11,95/month, 5,00/annually, 3,75/2years, 299,95/Lifetime For playing 60+ cognitive games</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app,Download from Google Play and Apple Store</p>



Photo	 <p>Spot the brown bird!</p>
Short description	ASPEN is designed to help slow down Dementia Progression.
Type of game	2D
Provider	Tiny Happy Steps
URL/Link	https://play.google.com/store/apps/details?id=com.TinyHappySteps.Bird&hl=en_US
Covered cognitive skills	Speed Information Processing Skills
Languages	English
Cost	Free
Required software and/or hardware equipment	Download from Google Play



<p>Photo</p>	
<p>Short description</p>	<p><i>A custom-designed, closed-loop video game that challenges an individual to engage rapidly and accurately in a high-interference 3D environment.</i></p> <p><i>In the game, which was developed by the UCSF researchers, participants race a car around a winding track while a variety of road signs pop up. Drivers are instructed to keep an eye out for a specific type of sign, while ignoring all the rest, and to press a button whenever that particular sign appears.</i></p> <p><i>The need to switch rapidly from driving to responding to the signs – i.e. multitasking – generates interference in the brain that undermines performance.</i></p>
<p>Type of game</p>	<p>3D video game</p>
<p>Provider</p>	<p>Gazzaley Lab</p>
<p>URL/Link</p>	<p>https://neuroscape.ucsf.edu/technology/#neuroracer</p>
<p>Covered cognitive skills</p>	<p>Speed Information Processing Skills, multitasking skills, attention skills, working memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Windows app. 3D video platform</p>

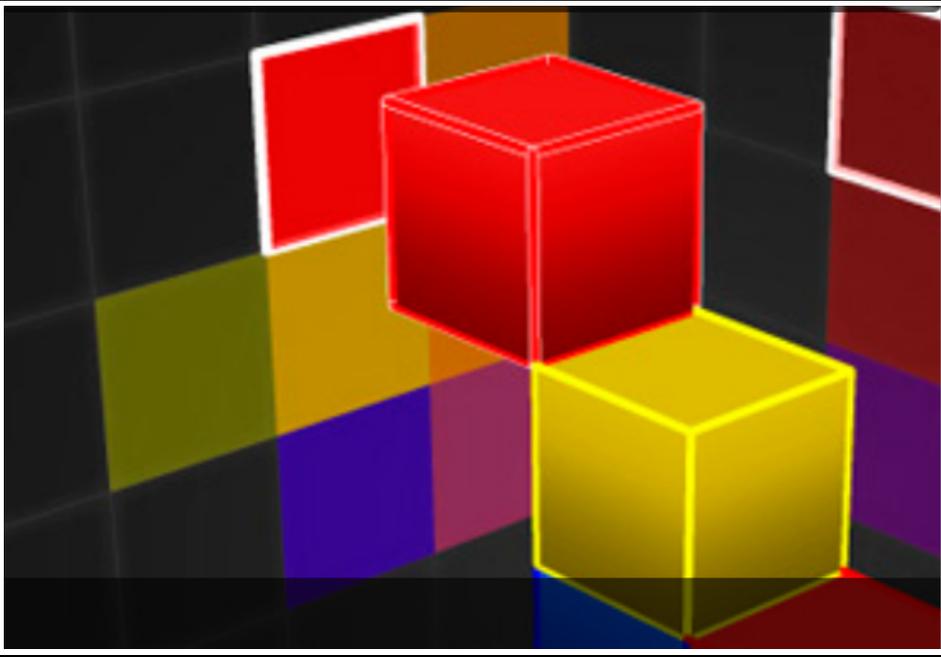
2.6. Games focusing on “Sequential Processing”

<p>Photo</p>	
<p>Short description</p>	<p>To advance in the game, we will have to line up three or more equal pieces, being able to exchange only the position of two adjacent pieces. However, as the level of complexity of this mind training game increases, the cognitive demands will increase.</p>
<p>Type of game</p>	<p><i>Twist It</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/twist-it</p>
<p>Covered cognitive skills</p>	<p>Sequencing, Planning, Visual Processing, Attention</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>



<p>Photo</p>	
<p>Short description</p>	<p>The objective of the game is to find the hinted words in a specific time</p>
<p>Type of game</p>	<p><i>Word Quest Twist</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/word-quest</p>
<p>Covered cognitive skills</p>	<p>Sequencing, Planning, Visual Processing, Attention</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>



Photo	
Short description	The aim is to build 3D shapes using cubes.
Type of game	<i>Star Architect</i> is an online 3D brain training game .
Provider	CogniFit
URL/Link	https://www.cognifit.com/aplicaciones/html5/brain/game/blockbuilder/l/en
Covered cognitive skills	Sequencing, Planning, Visual perception, Attention
Languages	English
Cost	Free
Required software and/or hardware equipment	Online , android app

<p>Photo</p>	
<p>Short description</p>	<p>The aim is to form words by rearranging the birds. The faster you find the word the higher is the score you get.</p>
<p>Type of game</p>	<p><i>Words Birds</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/words-birds/l/en</p>
<p>Covered cognitive skills</p>	<p>Sequencing, Planning, Visual perception, Attention</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>

<p>Photo</p>	
<p>Short description</p>	<p>The goal is to fill in all the cells of a grid with digits as fast as possible. The number of the digits depends on the level.</p>
<p>Type of game</p>	<p><i>Sudoku</i> is an online 2D brain training game.</p>
<p>Provider</p>	<p>CogniFit</p>
<p>URL/Link</p>	<p>https://www.cognifit.com/aplicaciones/html5/brain/game/sudoku-puzzle/1/en</p>
<p>Covered cognitive skills</p>	<p>Sequencing, Planning, Visual perception, Attention, Working memory</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Free</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>

<p>Photo</p>	
<p>Short description</p>	<p>Peak is a free* app provides more than 40 fun games to help you exercise your brain. Peak is designed to improve your memory, sharpen your problem-solving skills and develop your mental agility.</p>
<p>Type of game</p>	<p><i>Sudoku</i> is an online 2D brain training game.</p>
<p>Provider</p>	
<p>URL/Link</p>	<p>https://www.peak.net/</p>
<p>Covered cognitive skills</p>	<p>Sequencing, memory, problem solving skills</p>
<p>Languages</p>	<p>English</p>
<p>Cost</p>	<p>Peak is free to download, but to get all of the features—such as the full selection of games, personalized goals and training, and advanced statistics—Pyou need to subscribe. Your options are \$4.50 a month or \$36.88 a year</p>
<p>Required software and/or hardware equipment</p>	<p>Online , android app</p>



References

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