

# Overview

## Training Games

---

Dividat.



# Supported by Scientific Research

---

Dividat relies on scientific evidence and (inter)national research collaborations

Research at ETH Zurich formed the basis for the development of the Dividat Senso. The innovative training and testing device has been the subject of numerous scientific studies and has attracted a great deal of attention both in research and in everyday clinical practice.

All our training programs have been examined in scientific studies in collaboration with national and international institutions.

**ETH** zürich

Université   
de Montréal



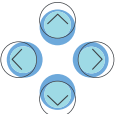


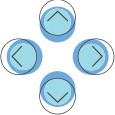








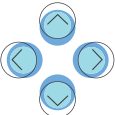




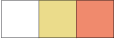










**USZ** Universitäts  
Spital Zürich

 **Karolinska  
Institutet**








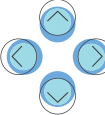


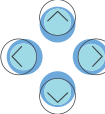








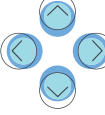


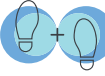




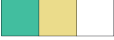

# List of Training Games

## 1/2

| Name    | Exercise Category   | Recommended User Level  | Movement Category  |
|---------|---|---|--|
| Arrows  |  Executive Functions | advanced - expert<br>   |  Steps All Directions     |
| Drops   |  Executive Functions | advanced - expert<br>   |  Steps All Directions     |
| Evolve  |  Executive Functions | advanced - expert<br>   |  Balance All Directions   |
| Flexi   |  Executive Functions | advanced<br>            |  Steps All Directions     |
| Targets |  Executive Functions | advanced<br>            |  Steps All Directions     |
| Cloudy  |  Balance             | beginner<br>            |  Steps Left/Right         |
| Ladybug |  Balance           | advanced - expert<br> |  Balance Left/Right     |
| Lumina  |  Balance           | advanced<br>          |  Balance All Directions |
| Ski     |  Balance           | advanced<br>          |  Balance Left/Right     |
| Simon   |  Memory            | advanced - expert<br> |  Steps All Directions   |

# List of training Games

## 2/2

| Name         | Exercise Category  | Recommended User Level  | Movement Category  |
|--------------|--|---|--|
| Hexagon      |  Orientation            | advanced - expert<br>     |  Steps Left/Right         |
| Snake        |  Orientation            | advanced<br>              |  Steps All Directions     |
| Birds        |  Reaction & Attention   | beginner<br>              |  Steps All Directions     |
| Divided      |  Reaction & Attention   | advanced<br>              |  Steps All Directions     |
| Habitats     |  Reaction & Attention   | advanced<br>              |  Steps All Directions     |
| Simple       |  Reaction & Attention   | beginner<br>              |  Steps All Directions     |
| Flaneur      |  Strength & Endurance | beginner<br>            |  Walking in Place       |
| Rocket       |  Strength & Endurance | beginner<br>            |  Walking in Place       |
| Sam's Garden |  Strength & Endurance | beginner - advanced<br> |  Walking All Directions |



# Arrows

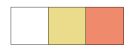
Executive Functions

## Trained functions

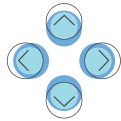
- Focus
- Inhibition
- Task switching

## Available Settings

- Duration
- Directions
- With mirroring



For advanced to expert users



Steps All Directions

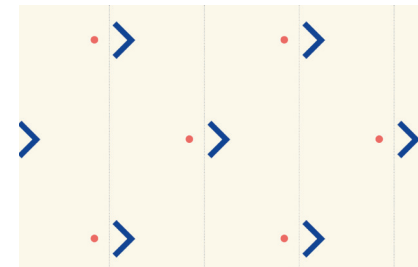
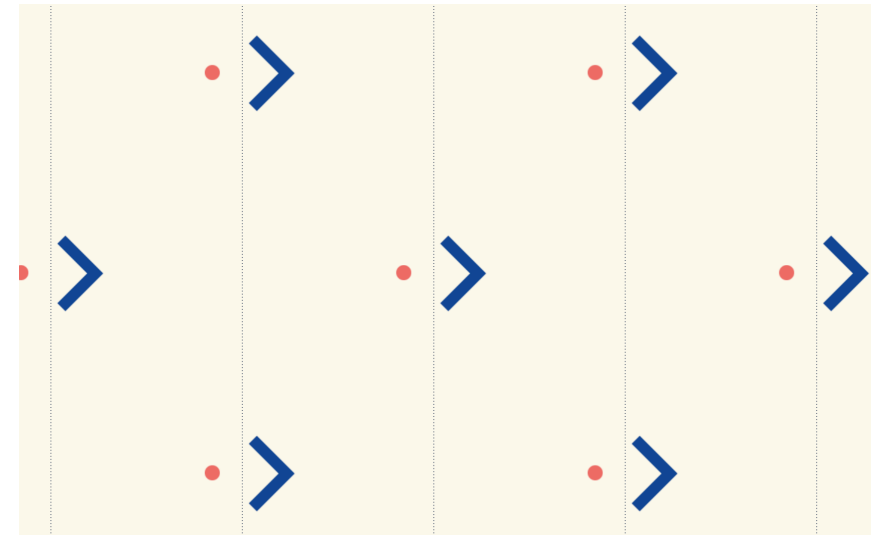
## Game description

Arrows is a fast-paced game that requires a significant amount of cognitive resources. The user needs to react quickly. The game is available in two settings, including an advanced mode for an even greater challenge.

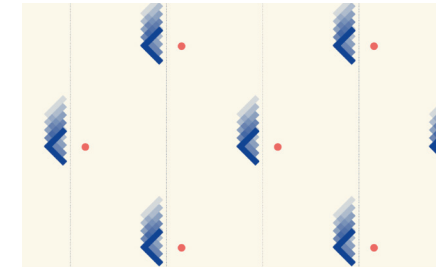
## How to play?

Arrows move across the screen, sometimes leaving trails. When the moving arrows leave a trail, step in the direction they move to. When there is no trail, step in the direction the arrows point to.

When the settings enable mirroring, you will sometimes see light arrows on a dark blue background. When you see the blue background, step in the opposite direction you would normally step in.



Step to the right  
(direction arrows point to)



Step down  
(direction arrows move to)



Mirroring enabled: Step left  
(opposite direction arrows move to)



# Birds

Reaction & Attention

## Trained functions

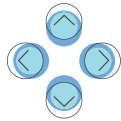
- Selective Attention

## Available Settings

- Directions



For beginners



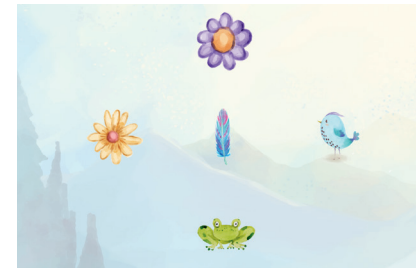
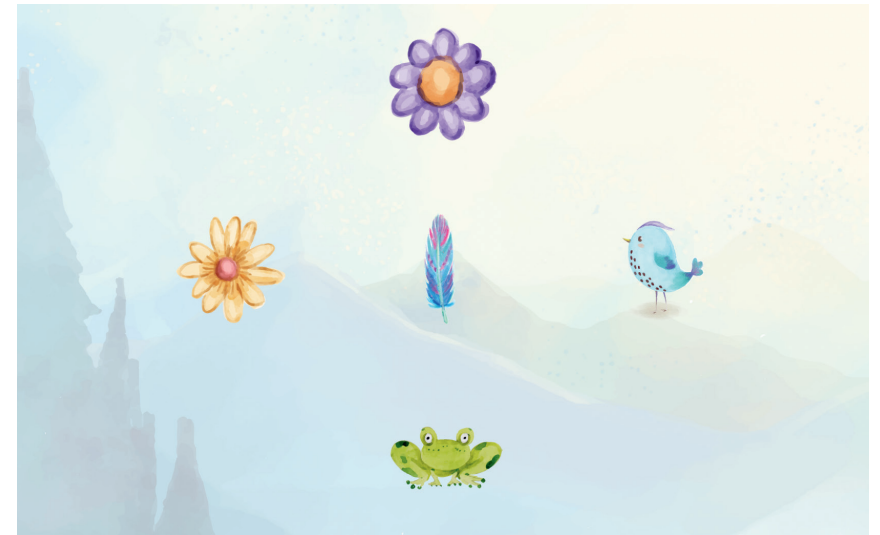
Steps All Directions

## Game description

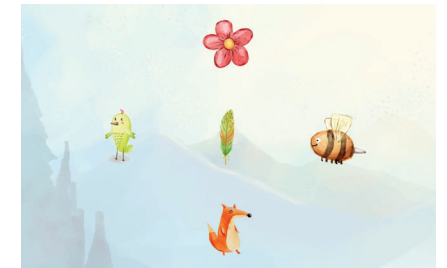
The training game „Birds“ is a delightful bird-themed game. With its vibrant visuals and soothing bird sounds, „Birds“ provides a captivating experience. This game is particularly enjoyed by beginners who appreciate the calming ambiance of birds sounds and the challenge of accurately matching colors.

## How to play?

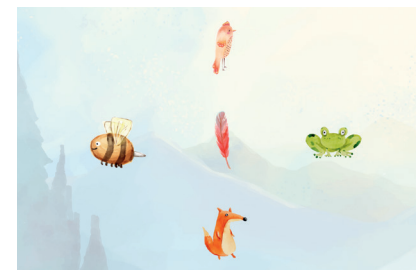
Assign the feather in the center to the corresponding bird. The task is to react as quickly as possible with the execution of a step in the direction of the right bird.



Step to the right  
(blue feather belongs to the blue bird)



Step left  
(green feather belongs to the green bird)



Step to the front  
(red feather belongs to the red bird)



# Cloudy

Balance

## Trained functions

- Balance control
- Focus
- Motor fine adjustment

## Available Settings

- Duration



For beginners



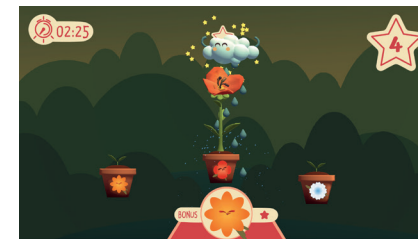
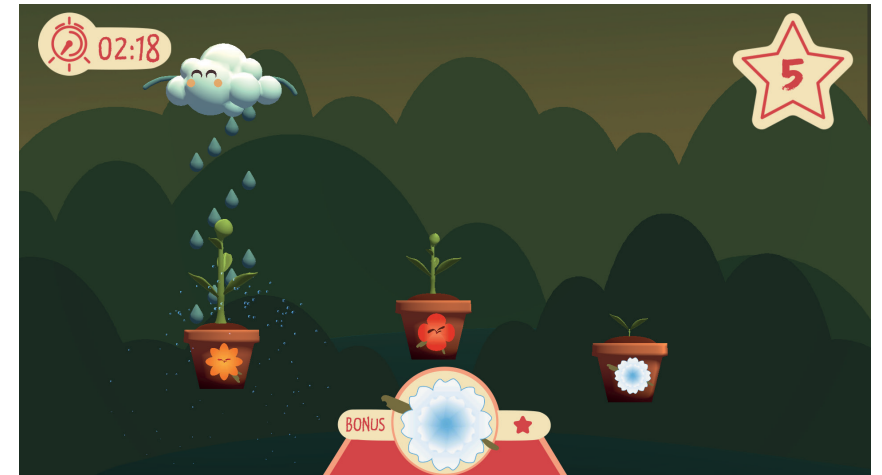
Steps Left/Right

## Game description

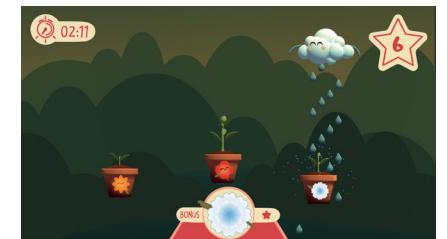
In this unique game, the task is to control a rain cloud and bring much-needed water to flower pots to make the flowers grow. Designed specifically for MS patients, this game also offers benefits for players of higher ages. By gently tapping with their feet, users can exercise and enhance their fine motor skills while immersing themselves in the soothing sounds of rain.

## How to play?

Water the flower pots. Move the rain cloud over the pots by taking steps to the right or left. Try not to waste any water and watch out for bonus flowers!



Hover over the pot to make the flowers grow



The bonus flower is indicated in the middle of the screen





# Divided

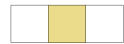
Reaction & Attention

## Trained functions

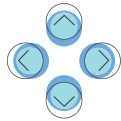
- Divided attention

## Available Settings

- Duration



For advanced users



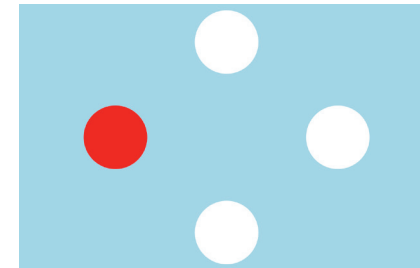
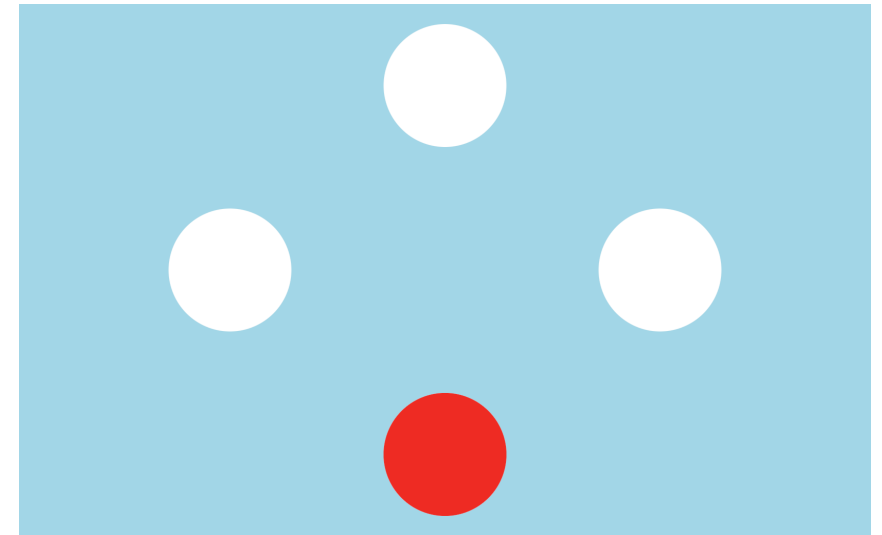
Steps All Directions

## Game description

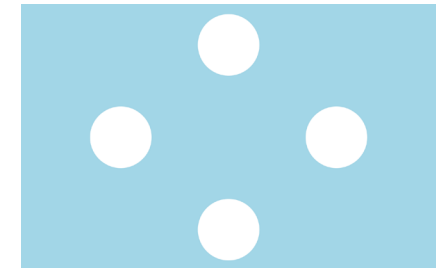
In this adaptive game, players are challenged to react quickly to both visual and acoustic stimuli. They must stay alert and respond promptly to the appearing red dots or acoustic sounds presented to them. With a combination of visual and auditory challenges, this game can be quite challenging. We recommend this game for advanced users.

## How to play?

There are four white circles on the screen. One of the circles changes its color to red. The task is to react as quickly as possible with the execution of a step in the direction of the red circle. In the same time two acoustic stimuli appear - a higher and a deeper sound. With the higher sound a step forward is expected, and with the deeper sound a step backward.



Step to the right, where the red dot appears



Step up or down when a high or low sound is played



# Drops

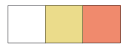
## Executive Functions

### Trained functions

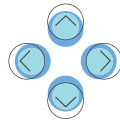
- Action planning
- Strategic planning
- Mental rotation
- Visuo-spatial orientation

### Available Settings

- Duration



For advanced to expert users



Steps All Directions

## Game description

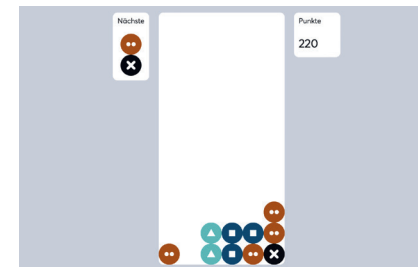
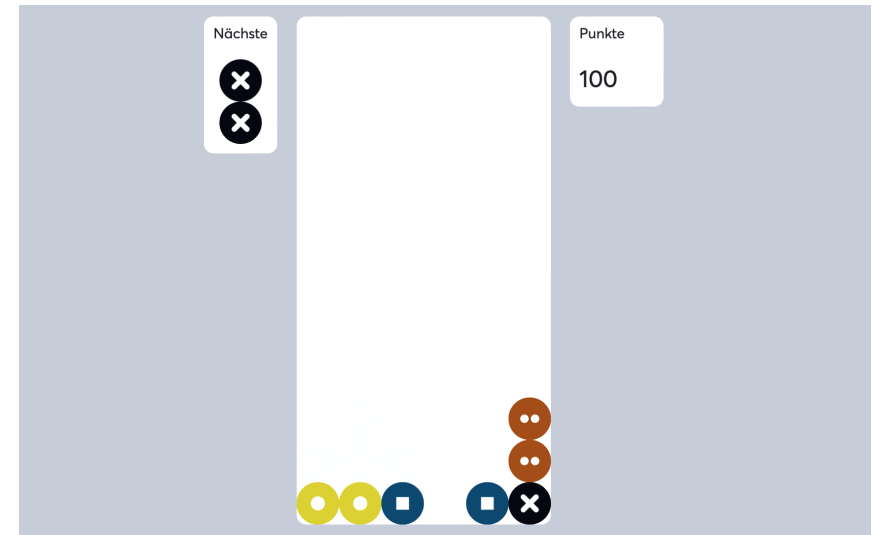
Drops is an exciting and challenging game in which players control a pair of drops of the same color and navigate them through a playing field. The objective is to strategically maneuver the drops to create a minimum of double pairs by matching them with foresight and speed. The game requires spatial awareness and mental agility to move the drops within the playing field.

## How to play?

Pairs of colored drops fall down from the top of the screen. When a drop lands near a drop of the same color, they connect into a group. Create four or more drops to make them burst and score points.

Step left or right to move the pair sideways. Step forwards to rotate the pair. Step backwards and hold to let it fall faster.

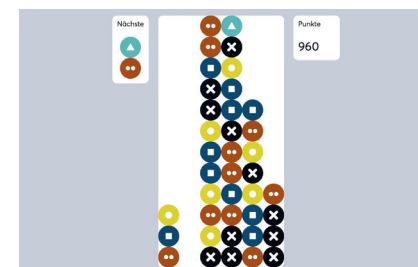
You make more points when you clear multiple groups by landing a single pair of drops.



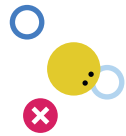
On the top left you see which pair is next



When you create a double pair, it will burst



The game is over when you reach the time limit or the top of the playing field



# Evolve

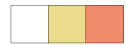
## Executive Functions

### Trained functions

- Anticipatory reaction
- Inhibition
- Selective Attention
- Static balance
- Weight shift

### Available Settings

- Duration



For advanced to expert users



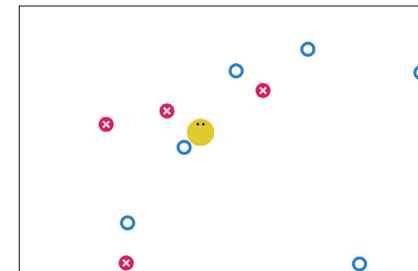
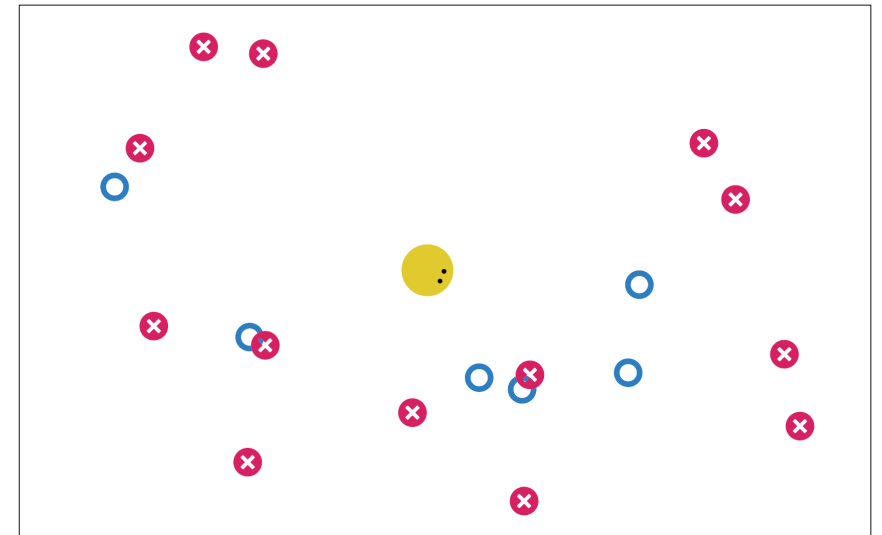
Balance All Directions

## Game description

In the game „Evolve,“ users take control of a yellow game character on a task for balance. The objective is to catch blue rings while skillfully avoiding the red circles. With each successful capture of a blue ring, the game character grows in size, symbolizing its evolution. Users must demonstrate their agility and precision to navigate the terrain.

## How to play?

Stand in the center with feet hip-width apart and shift your balance to catch the blue hoops and avoid red balls.



Try to catch the rings while avoiding the red circles



# Flaneur

Strength & Endurance

## Trained functions

- Endurance
- Focus

## Available Settings

- Duration



For beginners



Walking in Place

## Game description

In this game, users embark on a virtual exploration of the city of Zurich by walking in place. Users can immerse themselves in the vibrant streets of Zurich, walking through its iconic landmarks and discovering hidden gems.

## How to play?

Take steps to explore the scenery.



Takes steps in place to go through the scenery



The more steps you take, the faster you'll move



# Flexi

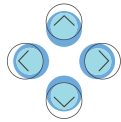
Executive Functions

## Trained functions

- Task switching



For advanced users



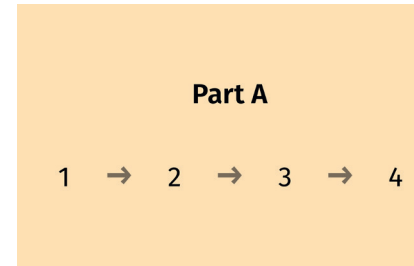
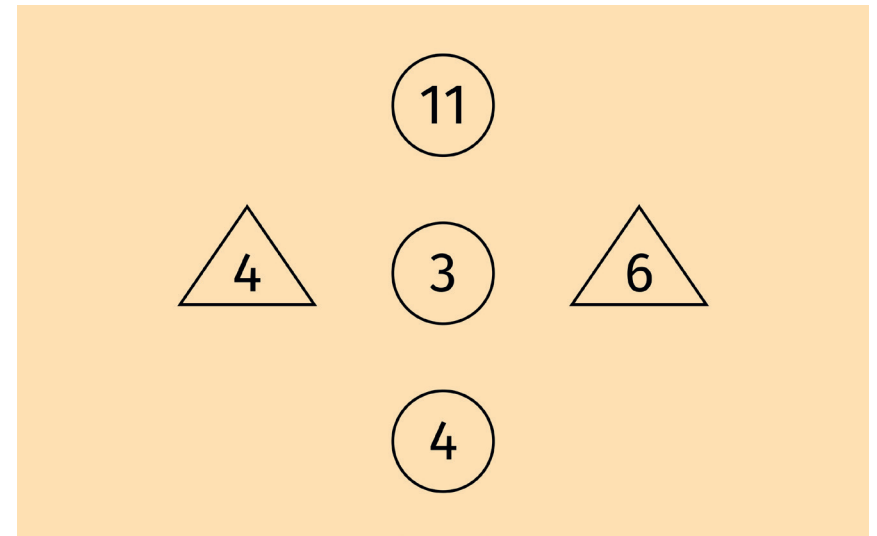
Steps All Directions

## Game description

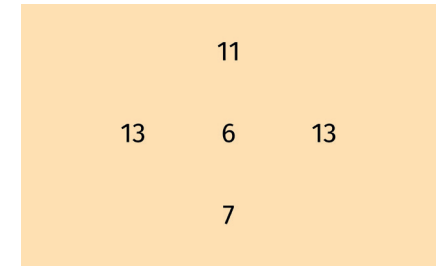
Flexi is an engaging and mentally challenging game. It starts off easy but gradually becomes more difficult, requiring users to mentally switch between different shapes and numbers. This game tests their task switching skills.

## How to play?

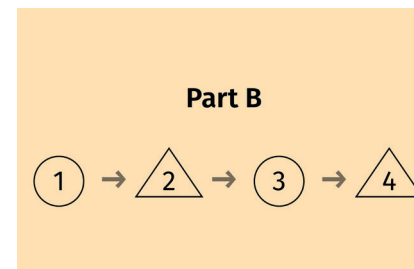
Flexi consists of two parts. In the middle of the screen a number appears and in part A it is required to execute a step to the direction of the next higher number as quickly as possible. In part B a figure around the number appears, and the task is to alternate between numbers in circles and numbers in triangles.



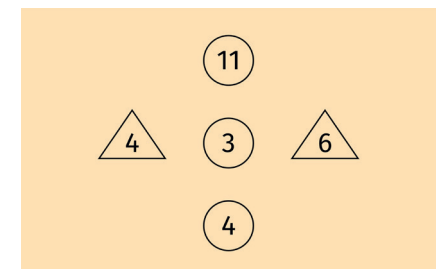
Part A requires to go to the next higher number



Step down. Next higher number is 7



Task B requires in addition to alternate between a circle and a triangle



Step left. The correct form and number is the number 4 in a triangle



# Habitats

Reaction & Attention

## Trained functions

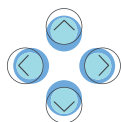
- Inhibition
- Selective Attention

## Available Settings

- Duration
- Directions



For advanced users



Steps All Directions

## Game description

In this game, users will find themselves immersed in a captivating adventure as they observe animals traversing through four stunning landscapes on their screens. The objective is to locate the animals that have strayed from their natural habitat and take a step towards them. With its engaging gameplay and beautiful visuals, this game offers an exciting challenge that tests selective attention.

## How to play?

Animals are moving across four landscapes on the screen. Find the animals that have escaped from their natural habitat and make a step in their direction. Try not to disturb the native animals!

- The bird belongs to the sky (up)
- The elephant belongs to the savanna (left)
- The squirrel belongs to the woods (right)
- The fish belongs to the water (down)



Step to the right, the fish doesn't belong to the savanna



Step up, the elephant doesn't belong to the sky



No step, the bird is in his natural habitat (the sky)



# Hexagon

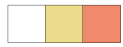
Orientation

## Trained functions

- Mental rotation
- Visuo-spatial orientation

## Available Settings

- Duration



For advanced  
and expert users



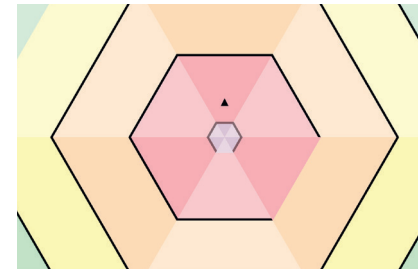
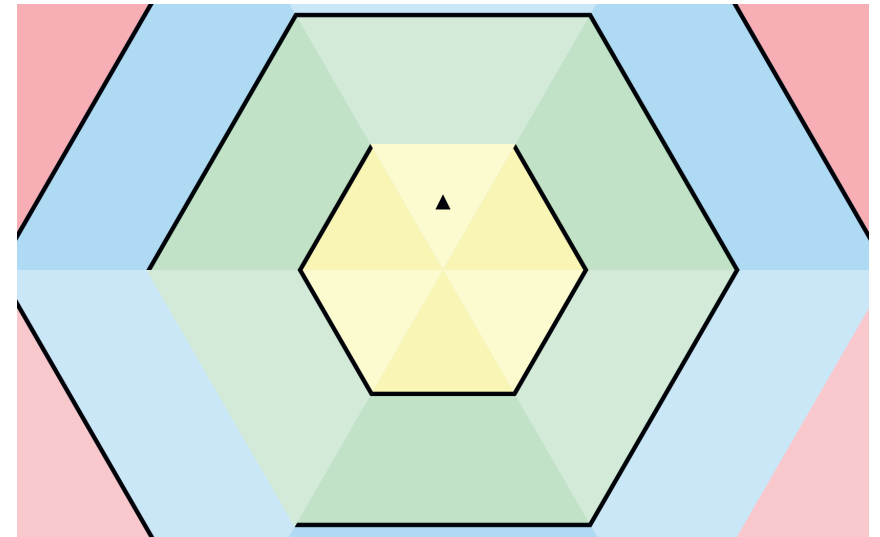
Steps Left/Right

## Game description

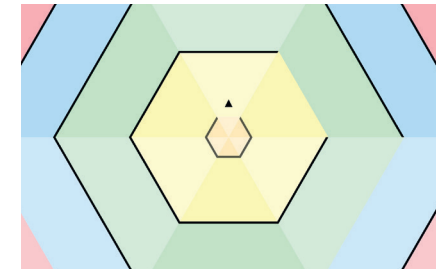
In this game, users step to their left or right to rotate and pass through open edges. The objective is to navigate through the maze-like structure by strategically rotating and finding the correct path. With its simple yet engaging gameplay and vibrant visuals, players will immerse themselves in this challenging and visually appealing experience.

## How to play?

Step to your left or right to rotate and pass through open edges.



Step to the right, twice



Step to the right, once



# Ladybug

Balance

## Trained functions

- Anticipatory reaction
- Inhibition
- Selective Attention
- Static balance
- Weight shift

## Available Settings

- Duration
- Difficulty



For advanced to expert users



Balance Left/  
Right

## Game description

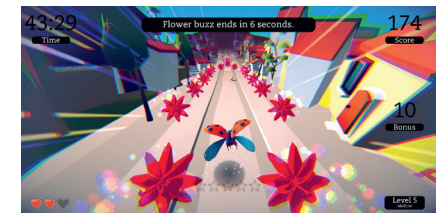
In this game, users will take control of a ladybug as they navigate through beautiful landscapes. Using precise movements to lean left and right, users must steer the ladybug through the terrain, avoiding obstacles while collecting vibrant flowers along the way.

## How to play?

Stand still in the center with your feet wider than hip-width apart. Steer the ladybug by leaning only to your left and right. Your goal is to collect the flowers and avoid the obstacles. Some flowers sparkle in the dew. Focus on them to achieve a bonus.



Catch the white bonus flower that glows to get more points



With enough bonus flowers you'll reach the flower buzz





# Lumina

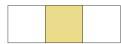
Balance

## Trained functions

- Mindfulness
- Static balance
- Weight shift

## Available Settings

- Duration



For advanced users



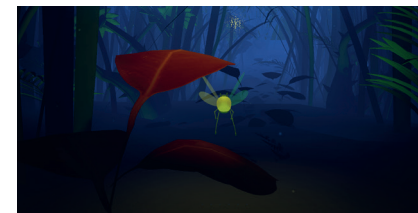
Balance All Directions

## Game description

In this game, users take on the role of a firefly as they navigate through a serene and peaceful landscape. The objective is to collect glowing lights scattered throughout the landscape, but players can also choose to simply enjoy the tranquil journey.

## How to play?

Steer a firefly through a calming landscape. Stand in the center with feet hip-width apart and shift your balance to control the direction of flight. Collect the glowing lights or simply enjoy the journey.



Collect the glowing lights



# Rocket

Strength & Endurance

## Trained functions

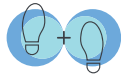
- Cardiovascular system
- Interval training
- Focus

## Available Settings

- Duration
- Target Speed



For beginners



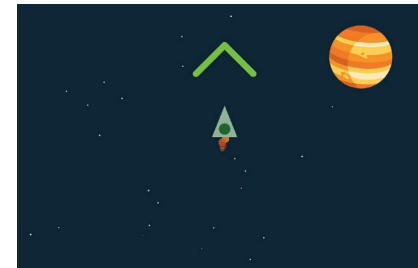
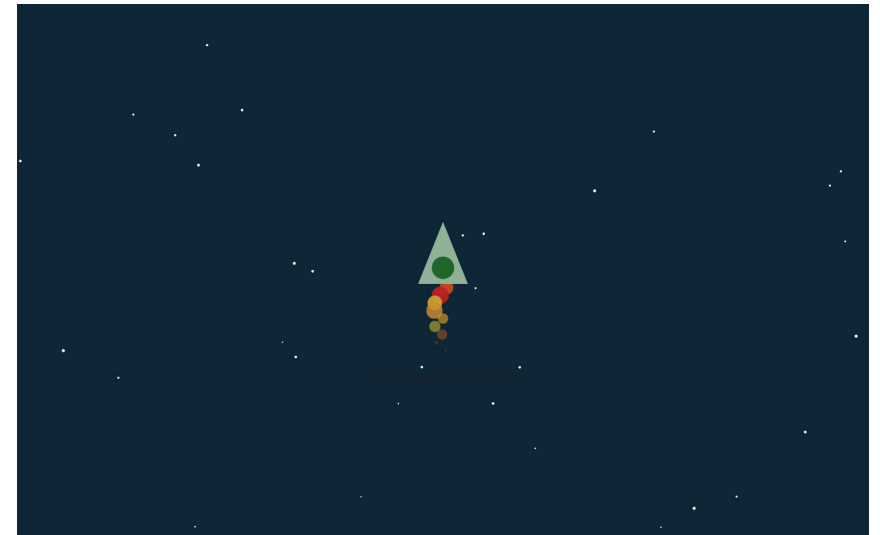
Walking in Place

## Game description

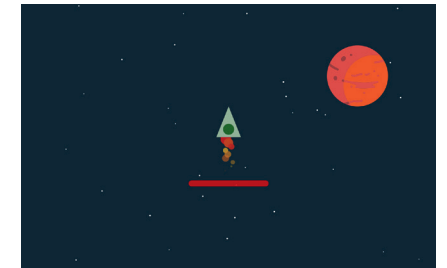
In this game, users take control of a rocket as they navigate through the vast expanse of the universe. The game provides visual cues to help users adjust their speed effectively.

## How to play?

Make steps on the center plate to fly the rocket through the universe. A green arrow in front of the rocket indicates that you should increase speed. A red bar behind the rocket indicates that you are going too fast and should slow down.



Step faster to increase the speed



Slow down to lower the speed



# Sam's Garden

Strength & Endurance

## Trained functions

- Balance control
- Dynamic balance
- Weight shift
- Inhibition
- Jumps
- Selective Attention

## Available Settings

- Duration
- Difficulty



For beginners and advanced users



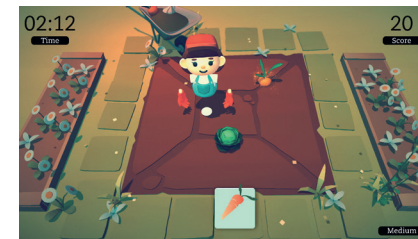
Walking All Directions

## Game description

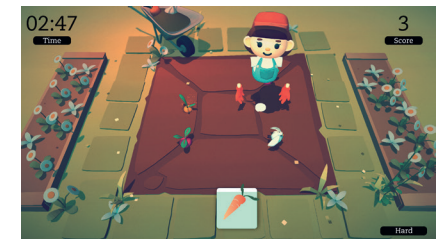
In this game, users can freely roam the surface of a garden patch and embark on a vegetable harvesting adventure.

## How to play?

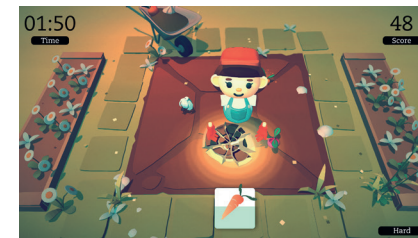
Walk freely across the surface to harvest vegetables in a garden patch. Stay in place over a vegetable to harvest it. Focus on ordered vegetable to gain a bonus. Migratory birds may bring new seeds, so try not to disturb them. If a rock appears in your garden, jump on it to crush it.



Harvest the bonus vegetables



Try not to disturb the birds



Crush the rocks by jumping



# Simon

Memory

## Trained functions

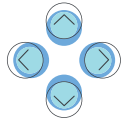
- Short-term memory

## Available Settings

- Duration



For advanced  
and expert users



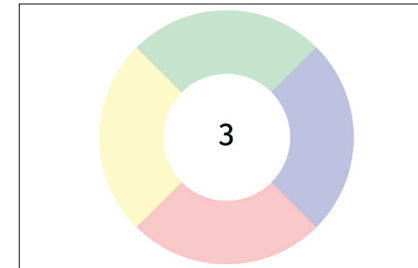
Steps All Directions

## Game description

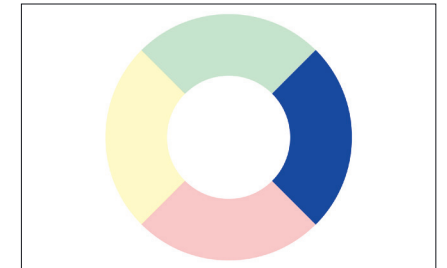
Step into the captivating world of Simon, where your auditory and visual senses will be put to the test. This thrilling game challenges your memory as you embark on a journey to repeat increasingly complex sequences of tones and lights.

## How to play?

A series of tones with a corresponding light is created, starting with one tone and continuously adding one. The task is to repeat the sequence of tones with steps.



Wait for the timer



Wait until the whole sequence is  
presented before starting



# Simple

Reaction & Attention

## Trained functions

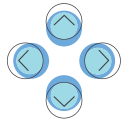
- Reaction speed

## Available Settings

- Duration
- Directions



For beginners



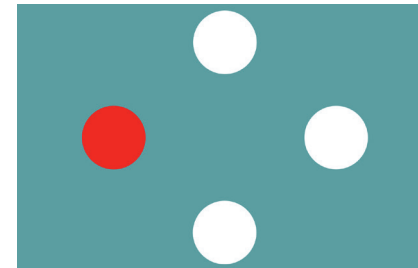
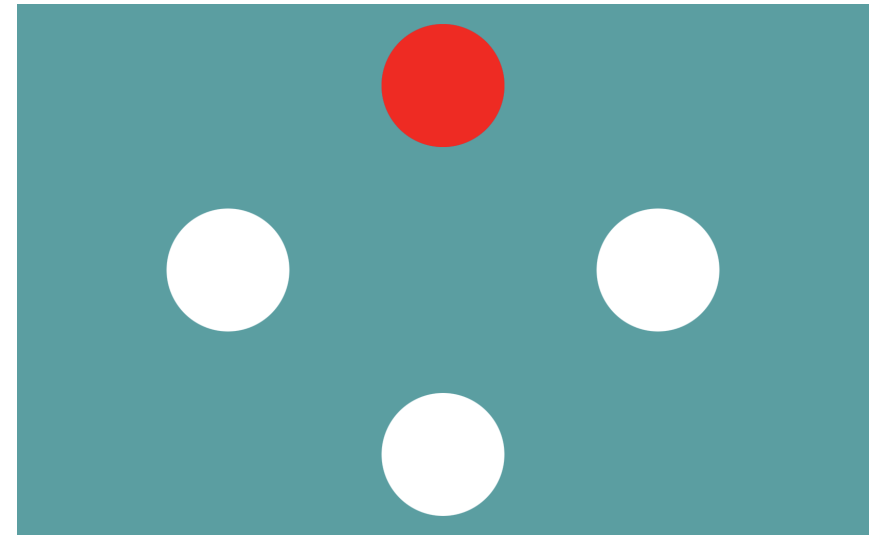
Steps All Directions

## Game description

Welcome to Simple, where players engage in a world of quick decisions. Four white circles grace the screen, and when one turns red, the action begins. With its minimalist design and fast gameplay, Simple presents a challenge that requires players to react quickly.

## How to play?

There are four white circles on the screen. One of the circles changes its color to red. The task is to react as quickly as possible with the execution of a step in the direction of the red circle.



Step to the right, as fast as possible



# Ski

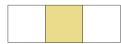
Balance

## Trained functions

- Inhibition
- Static balance
- Weight shift

## Available Settings

- Duration
- Wheelchair



For advanced users



Balance Left/Right

## Game description

In this exhilarating ski game, players must navigate through a snowy landscape filled with obstacles. The objective is simple: use precise leaning movements to avoid incoming trees, rocks, and even snow monsters! With quick reflexes and strategic thinking, players can conquer the slopes in this thrilling adventure. This game is appropriate for wheelchair users: Make sure to select the option in the game settings.

## How to play?

Remain in the center and lean to your left or right to avoid trees, rocks and snow monsters!



Gain more tracktin with the slope and avoid other obstacles

# Snake

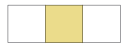
Orientation

## Trained functions

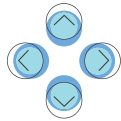
- Navigation
- Visuo-spatial orientation

## Available Settings

- Duration



For advanced users



Steps All Directions

## Game description

In this game, users control a white snake as it sneaks across the screen. Their task is to navigate the snake by taking steps and eat the red square. The game features a minimalistic design, focusing on simplicity and clean visuals. As the snake devours more red squares, it gradually lengthens.

## How to play?

A white snake sneaks across the screen. The task is to eat the red square through navigating the snake with steps.



Navigate the snake to eat the red squares



# Targets

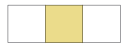
Executive Functions

## Trained functions

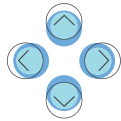
- Action planning
- Anticipatory reaction
- Goal-directed stepping

## Available Settings

- Duration
- Directions



For advanced users



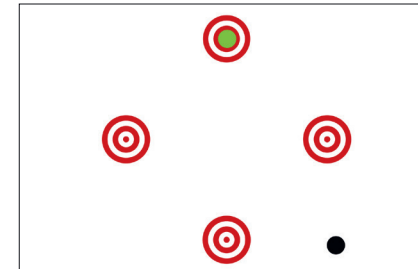
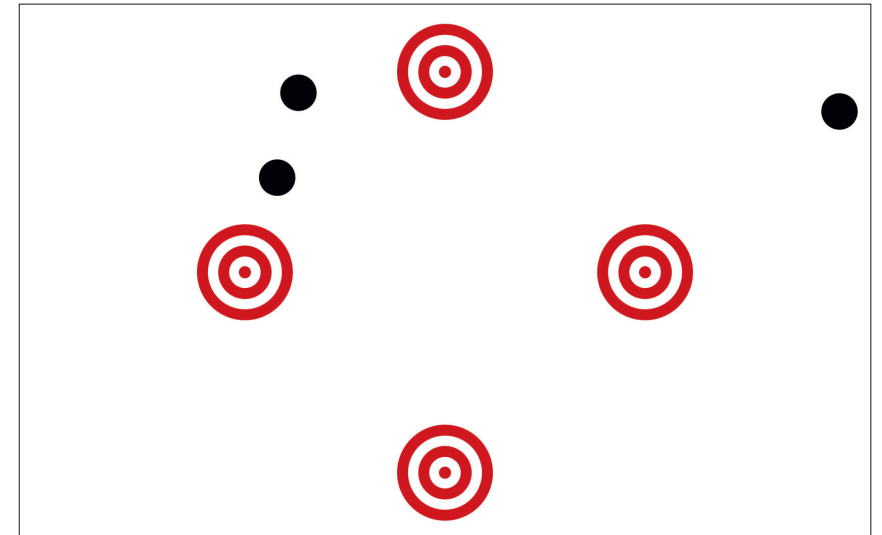
Steps All Directions

## Game description

In this game, the user is presented with four targets on the screen. From all directions, balls suddenly appear and fly towards one of the targets. The user's objective is to react swiftly by taking a step in the direction of the target as soon as the ball precisely reaches the center of the target. It requires quick reflexes and precise timing to successfully hit the target.

## How to play?

Four targets are seen on the screen. From all directions balls appear and fly in the direction of one of the targets. The task is to react with a step in the direction of the target as soon as the ball exactly reaches the middle of the target.



Try to hit the target when the ball is precisely in the middle