VAST.Rehab
REHABILITATION IN VIRTUAL REALITY

BASE PACK FOR PULMO

2025.1

WHAT IS NEEDED?

Please make sure the PC where you want this module to be active have VAST.Rehab Patient Panel installed and that the following hardware requirements are met:

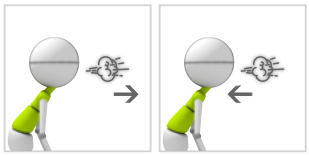
- Windows 10/11
- Intel Core i5 (8th gen or newer). Important: Avoid ultra-low-power versions (e.g., i5-8250U), as they may not meet performance requirements. Prefer standard or high-performance CPUs.
- Minimum: 8 GB RAM (16 GB or more recommended for optimal performance).

SPEED

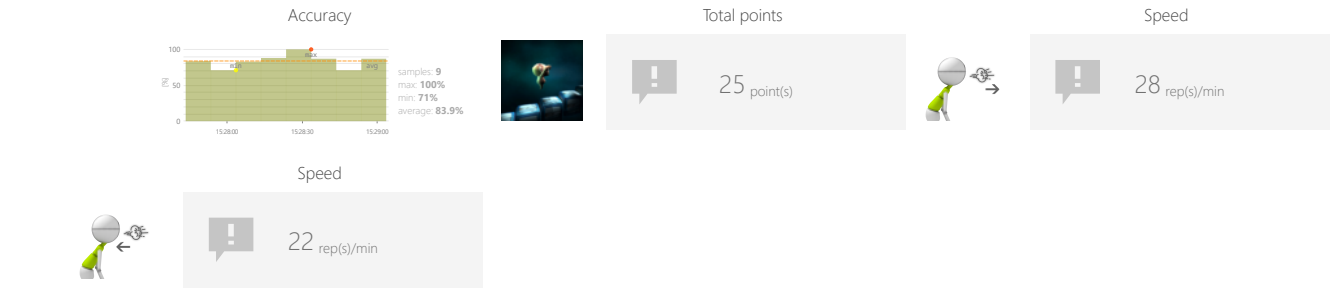
STAIRS

Measure number of repetitions of specific movement pattern an individual is able to perform within predefined time interval.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Max time per floor
- Number of stairs
- Pause length
- Resistance

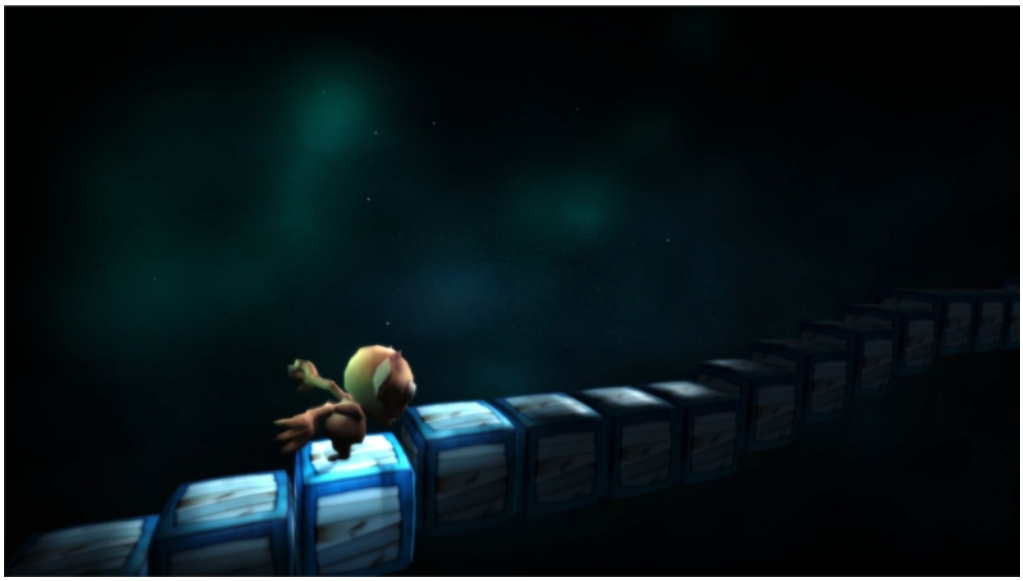
OBJECTIVES

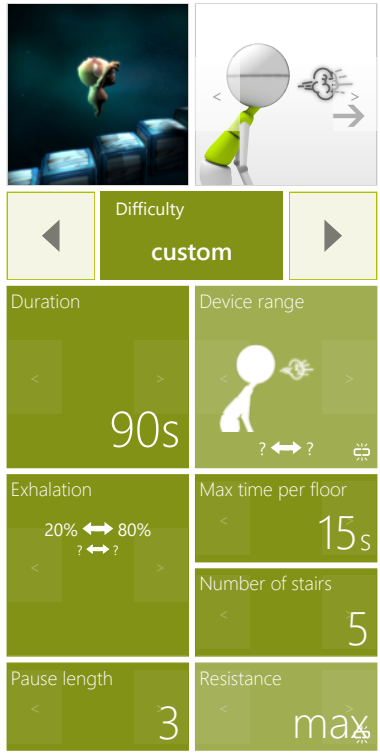
- Dynamics of planned movements

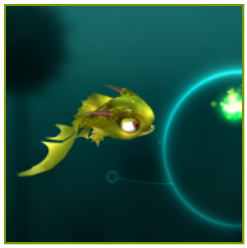
INSTRUCTION FOR PATIENT

Climb the stairs before they disappear.

SAMPLE SETTINGS







MOVEMENT PRECISION

FISH

Measure and train individual's skills to perform specific movement patterns with predefined speed and range.

CONTROL MODES

RESULTS

Accuracy

Total points

11 point(s)

Movement precision

20 %

ADJUSTMENTS

- Task duration
- Movement mode
- Route shape
- Speed of objects
- Resistance

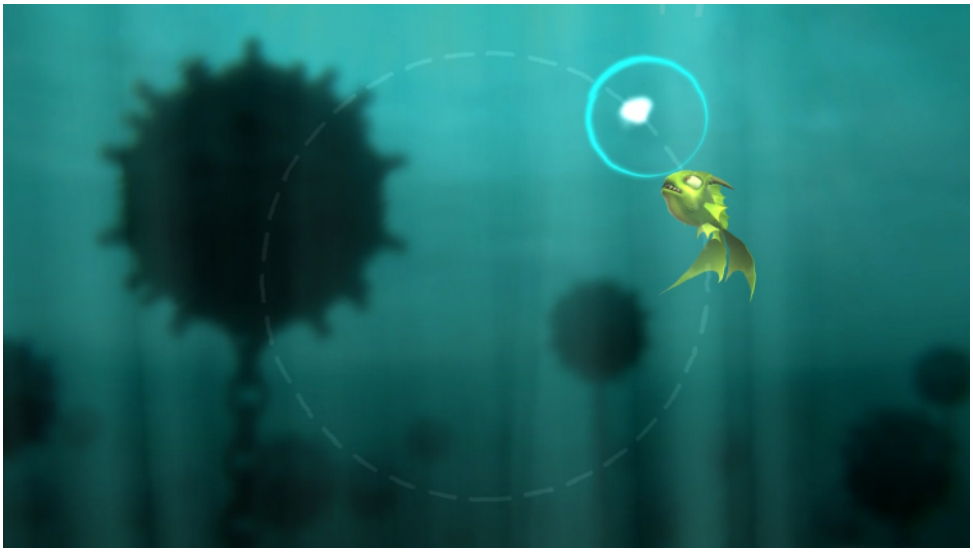
OBJECTIVES

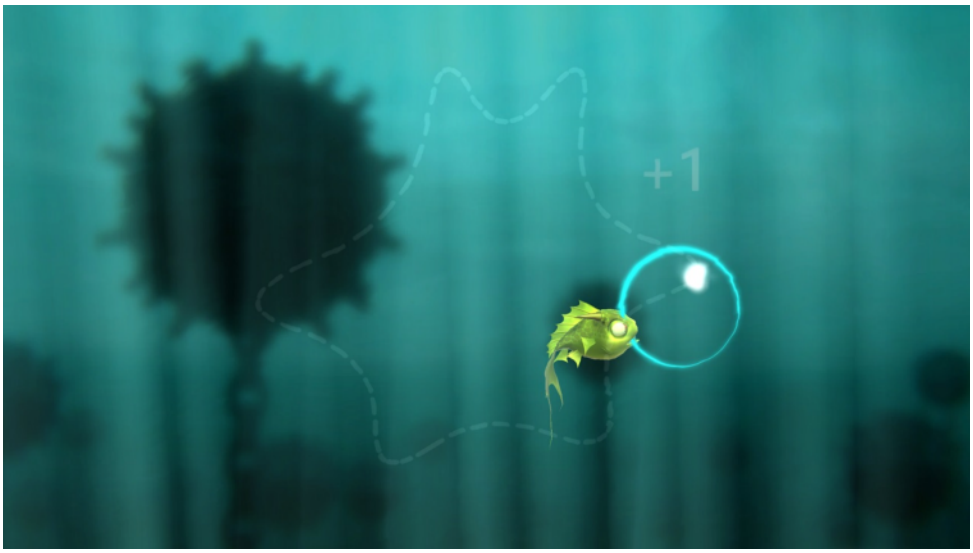
- 3D space movements reproduction
- Planned movements
- Muscle strengthening
- Movement precision
- Visual motor coordination

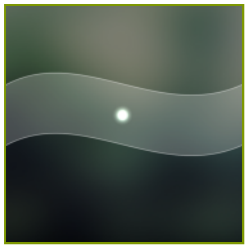
INSTRUCTION FOR PATIENT

Move the blue circle to protect the sparks source from the fish. When the sparks source is inside the circle it is safe.

SAMPLE SETTINGS







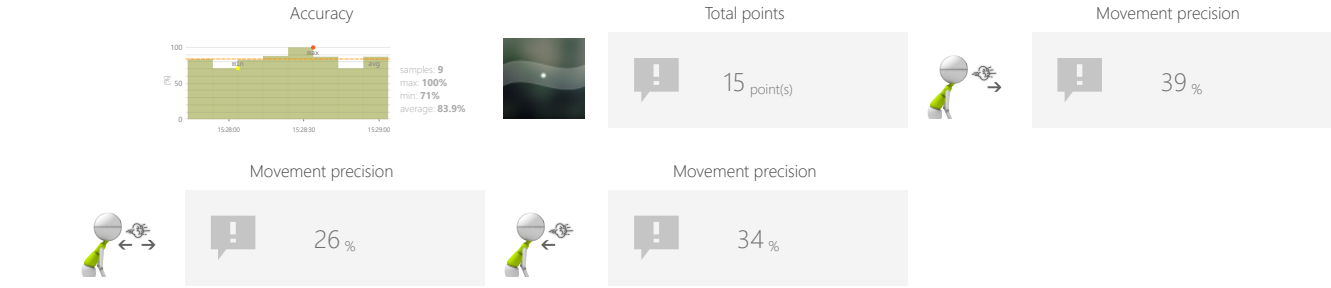
MOVEMENT PRECISION

GRAPH

Measure and train individual's skills to perform specific movement patterns with predefined speed and range.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Graph shape (sinus or square, amplitude, border, etc.)
- Task duration
- Resistance

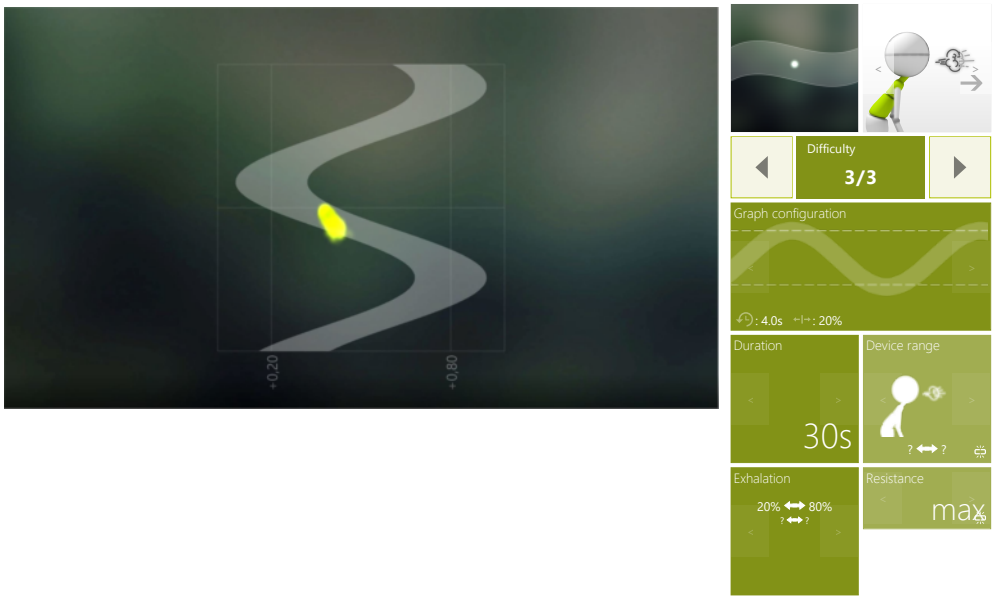
OBJECTIVES

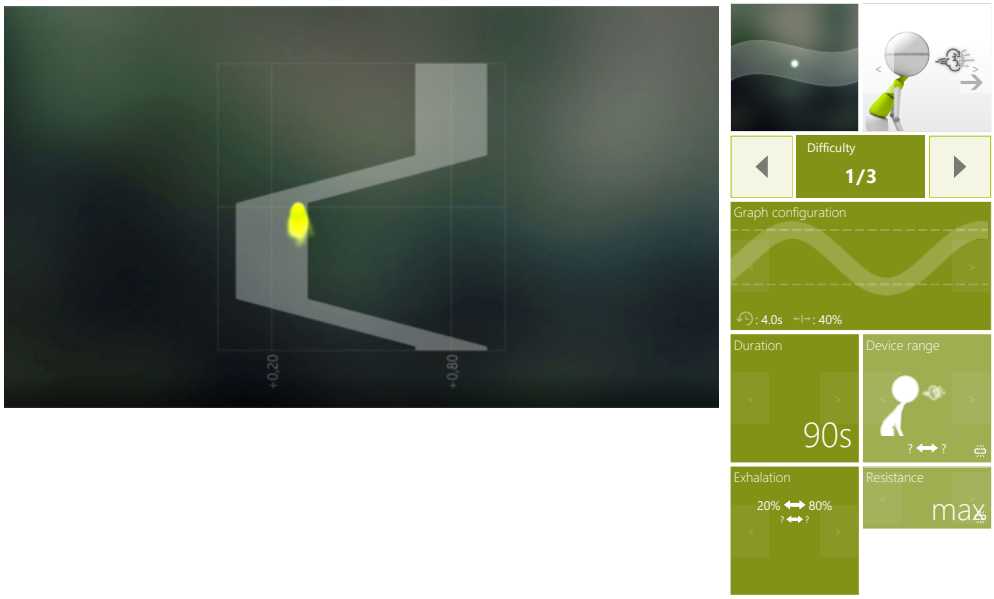
- Movement precision
- Activity in a given rhythm
- Repetitive movements

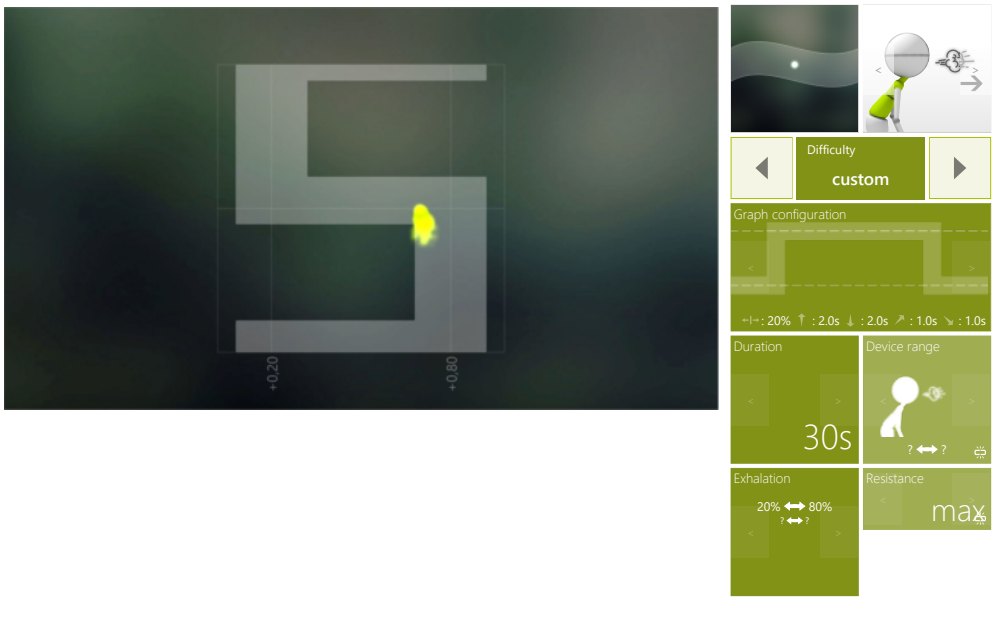
INSTRUCTION FOR PATIENT

Try to stay within the borders.

SAMPLE SETTINGS







MOVEMENT PRECISION

UMBRELLA

Measure and train individual's skills to perform specific movement patterns with predefined speed and range.

CONTROL MODES

RESULTS

Accuracy

Total points

16 point(s)

Movement precision

24 %

ADJUSTMENTS

- Task duration
- Path
- Umbrella size
- Resistance

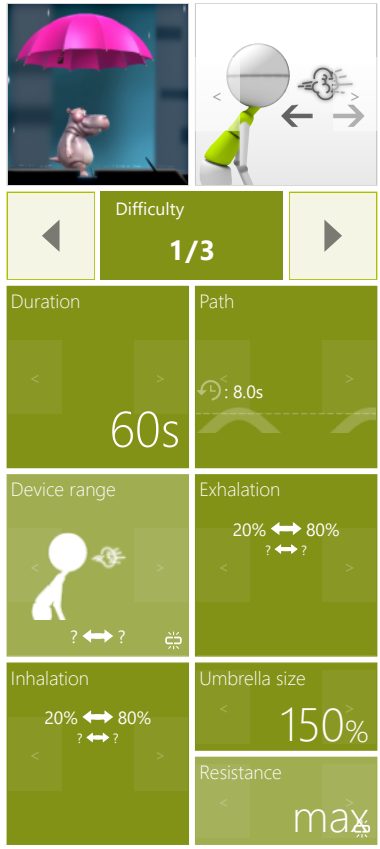
OBJECTIVES

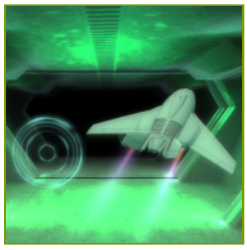
- Movement precision
- Visual motor coordination

INSTRUCTION FOR PATIENT

Don't let the hippo get wet - keep the umbrella above him!

SAMPLE SETTINGS





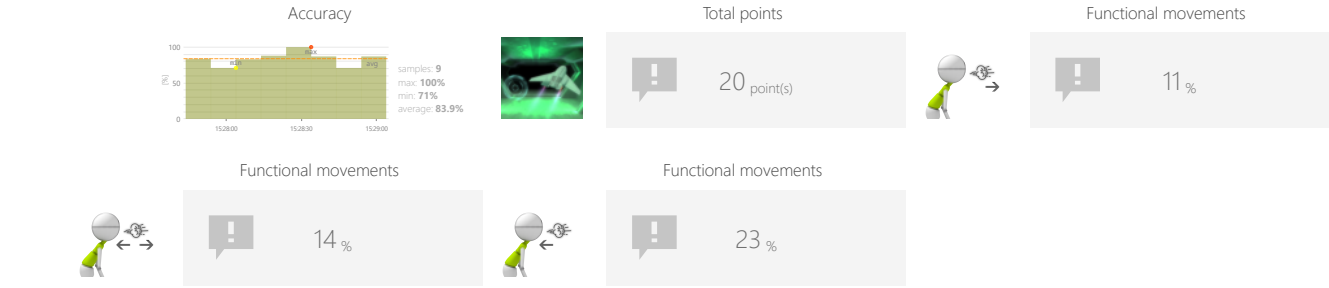
FUNCTIONAL MOVEMENTS

AIRPLANE

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Resistance

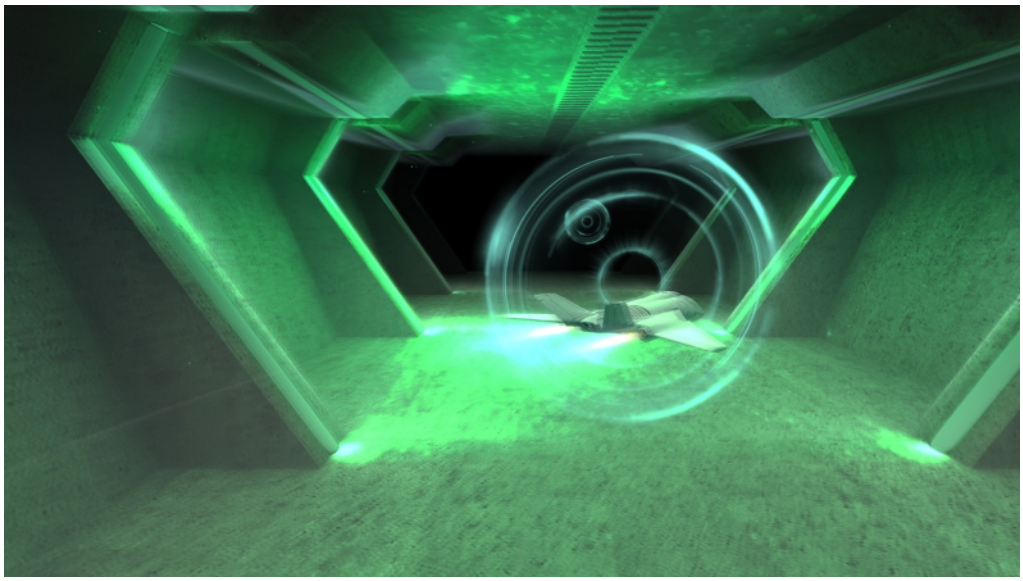
OBJECTIVES

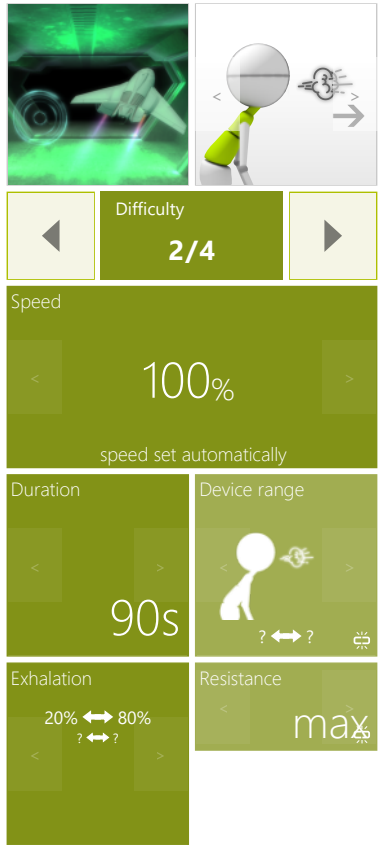
- Focusing
- Perceptivity
- Movement precision
- Predicting the trajectory of objects in 3D space

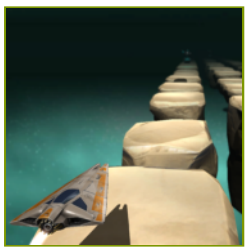
INSTRUCTION FOR PATIENT

Make the airplane fly through the circles. The closer to the center it flies the more points you get.

SAMPLE SETTINGS







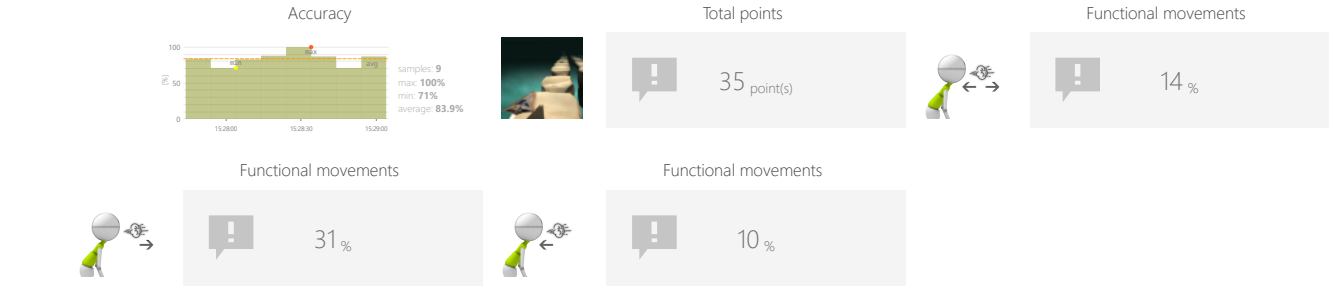
FUNCTIONAL MOVEMENTS

STONES

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Resistance

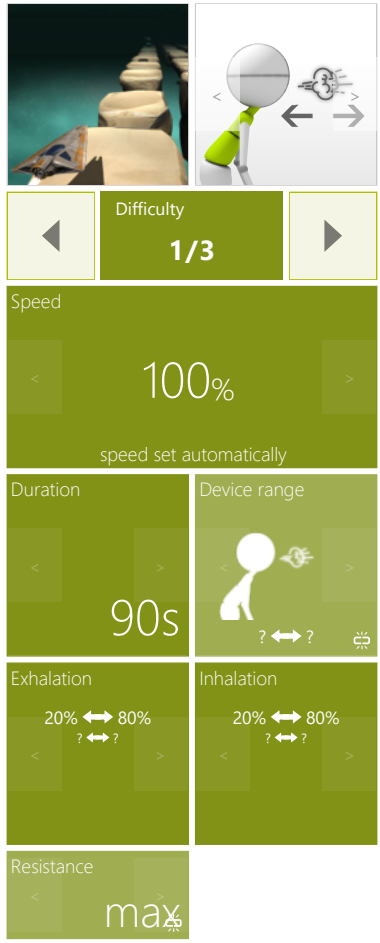
OBJECTIVES

- Perceptivity
- Dynamics of planned movements
- Reaction to the positive visual stimuli
- Response to negative visual stimuli

INSTRUCTION FOR PATIENT

Make the the spaceship collect the colorful creatures and avoid the rocks.

SAMPLE SETTINGS



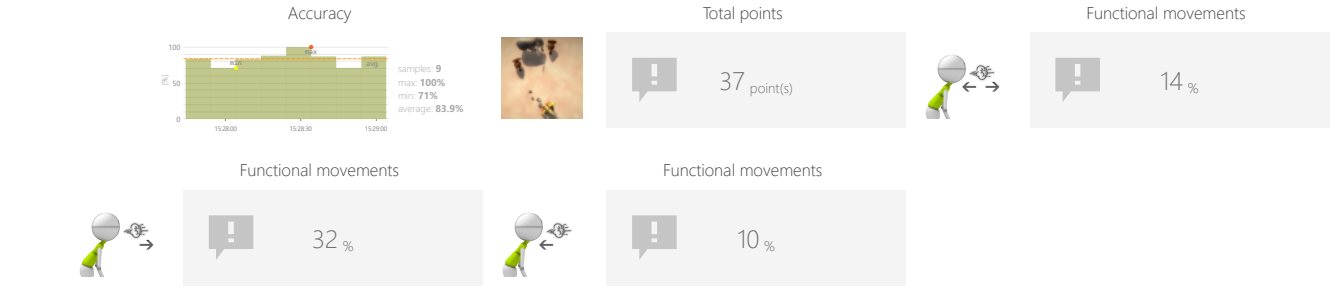
FUNCTIONAL MOVEMENTS

AUTOMATIC CANNON

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Task duration
- Enable distractors
- Time between cannonballs
- Time between enemies
- Enemies speed
- Resistance

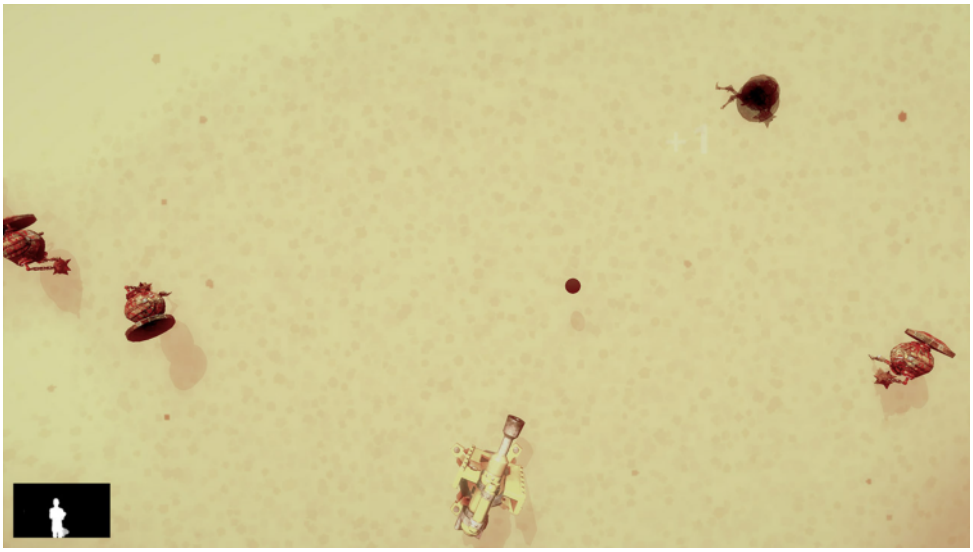
OBJECTIVES

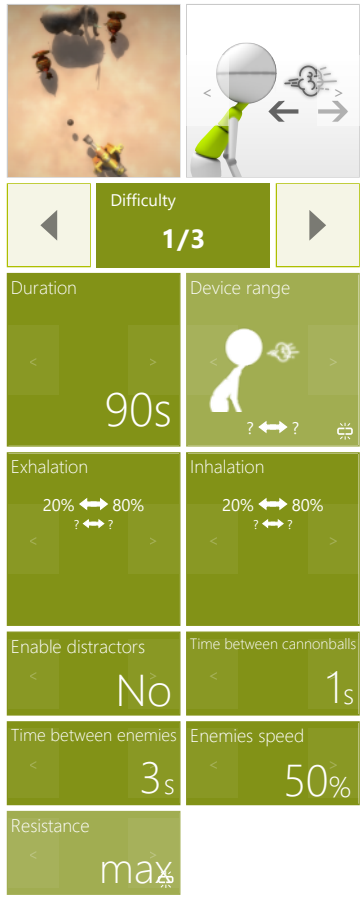
- Divided attention
- Spontaneous movements
- Predicting the trajectory of objects

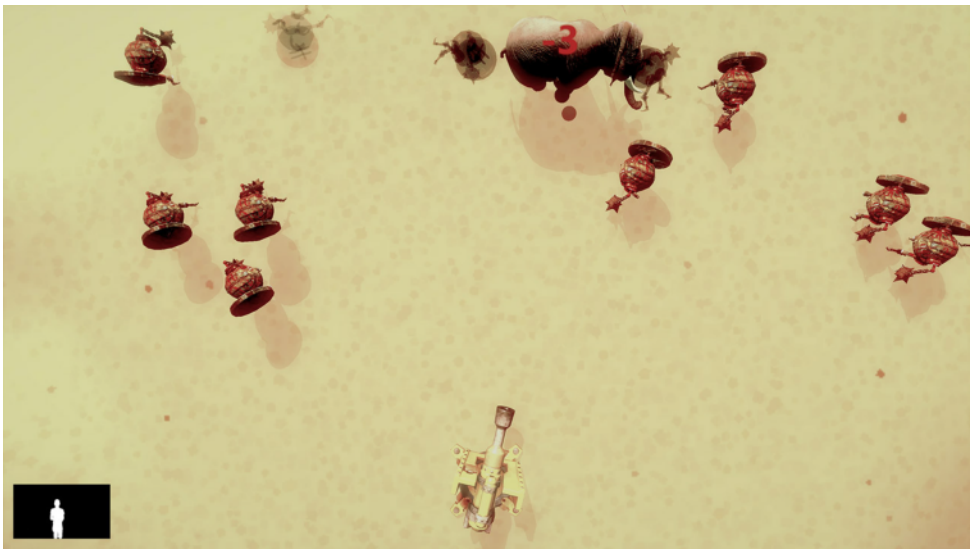
INSTRUCTION FOR PATIENT

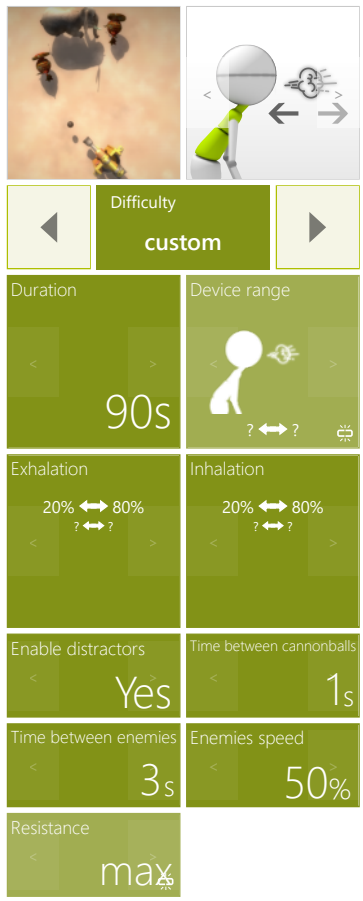
Control cannon(s) to destroy robots, but avoid hitting the elephant!

SAMPLE SETTINGS







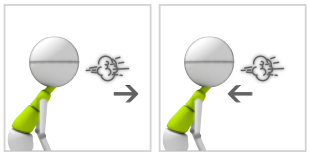


FUNCTIONAL MOVEMENTS

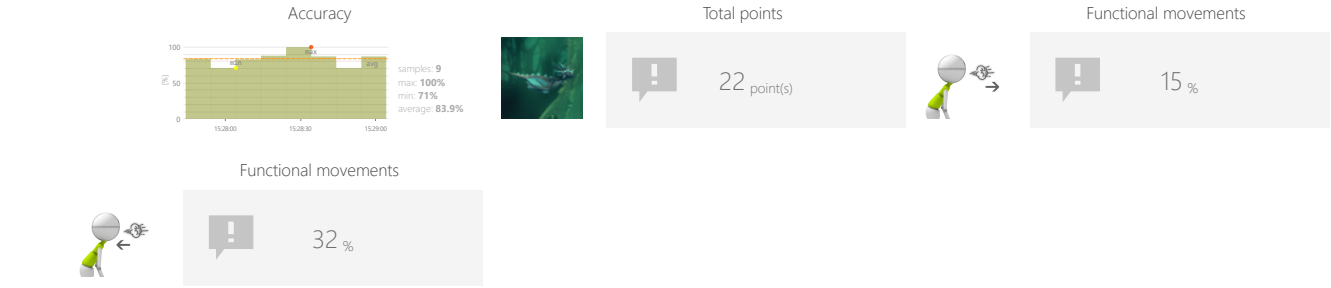
DRAGON

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Coins group size
- Distance between coins
- Gravity force
- Resistance

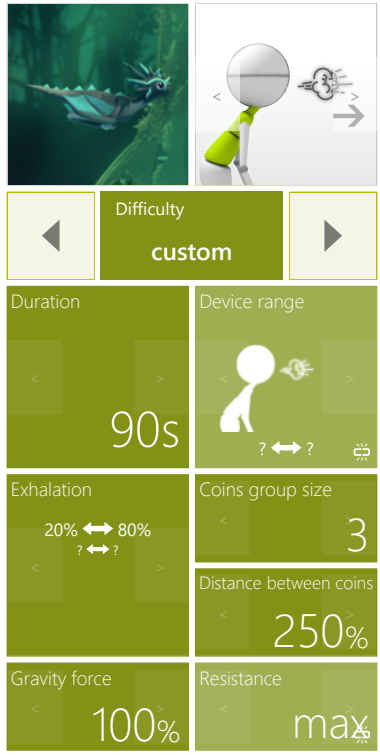
OBJECTIVES

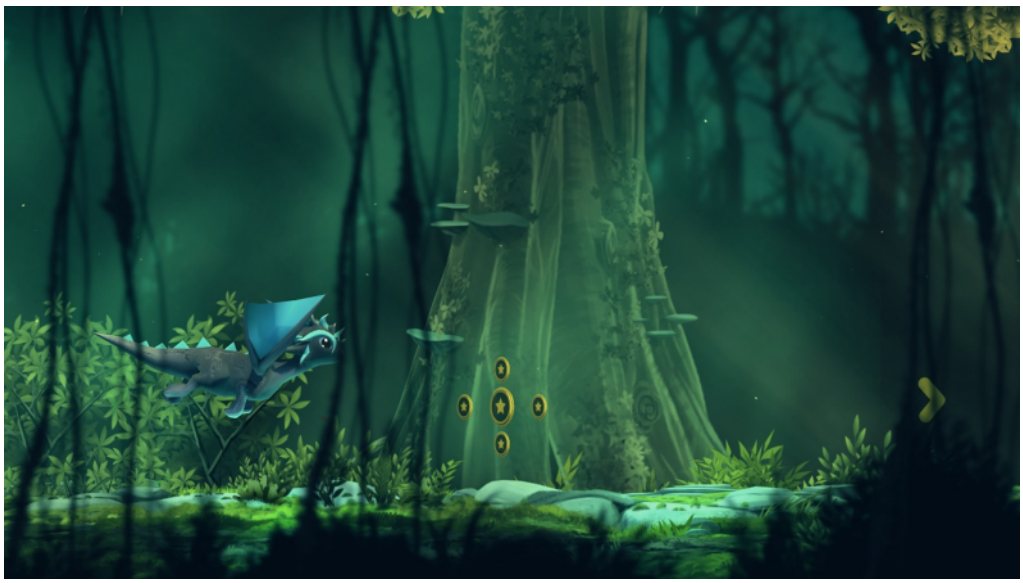
- Predicting the trajectory of objects
- Improve range of motion
- Visual motor coordination
- Muscle strengthening
- Planning and Strategy

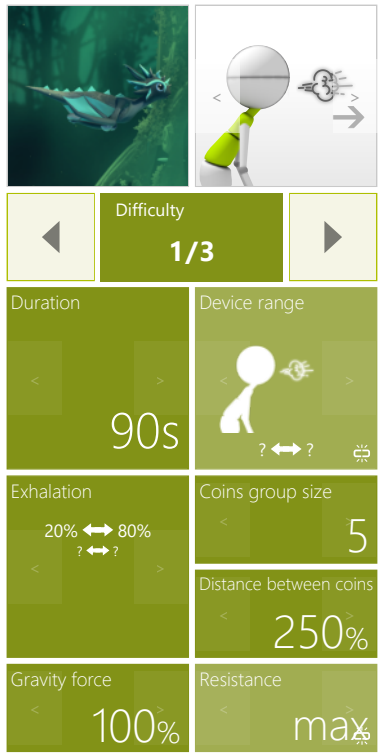
INSTRUCTION FOR PATIENT

Fly and collect the coins.

SAMPLE SETTINGS





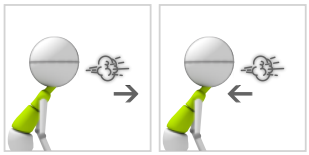


FUNCTIONAL MOVEMENTS

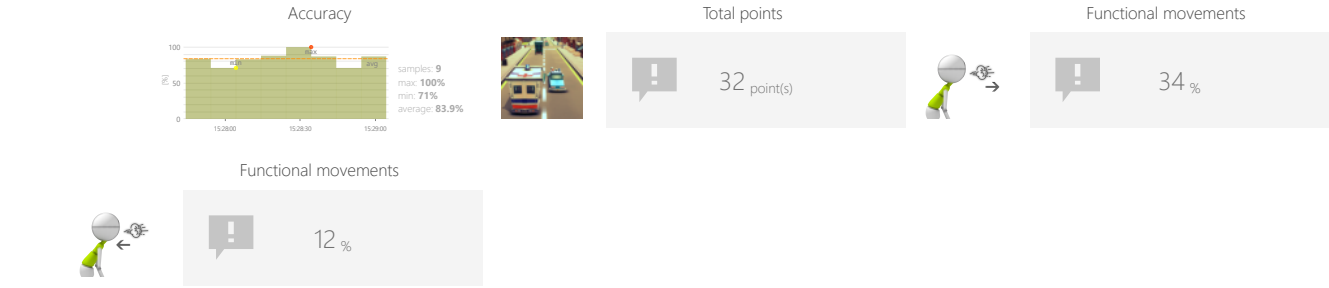
AMBULANCE

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Speed
- Task duration
- Distance between cars
- Resistance

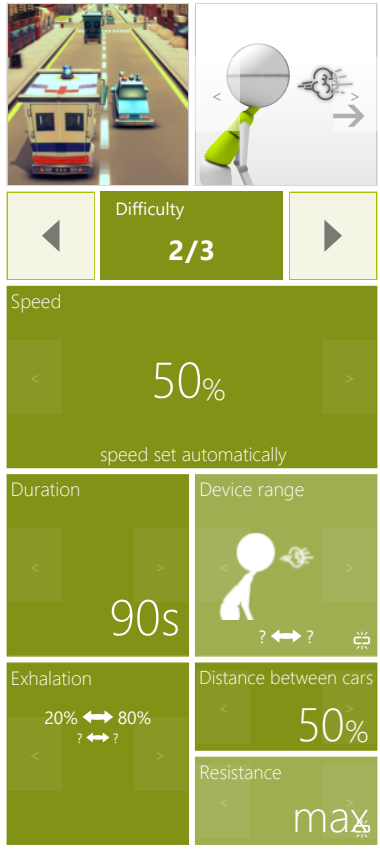
OBJECTIVES

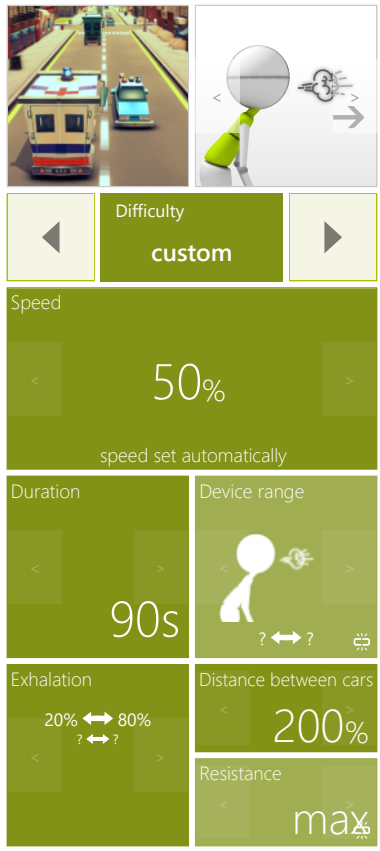
- Dynamics of planned movements
- Focusing
- Speed of decision making
- Visual motor coordination

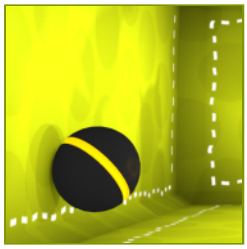
INSTRUCTION FOR PATIENT

Go as fast as you can and avoid hitting other cars.

SAMPLE SETTINGS







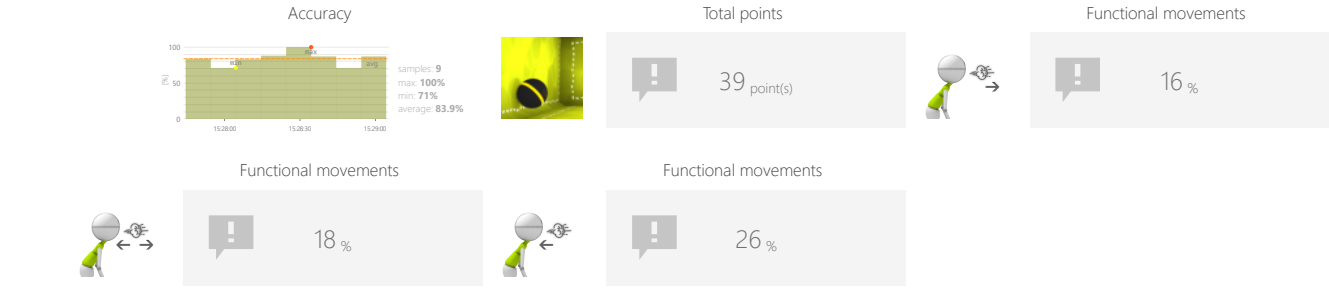
FUNCTIONAL MOVEMENTS

ARCANOID

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Task duration
- Reticle size
- Speed of objects
- Resistance

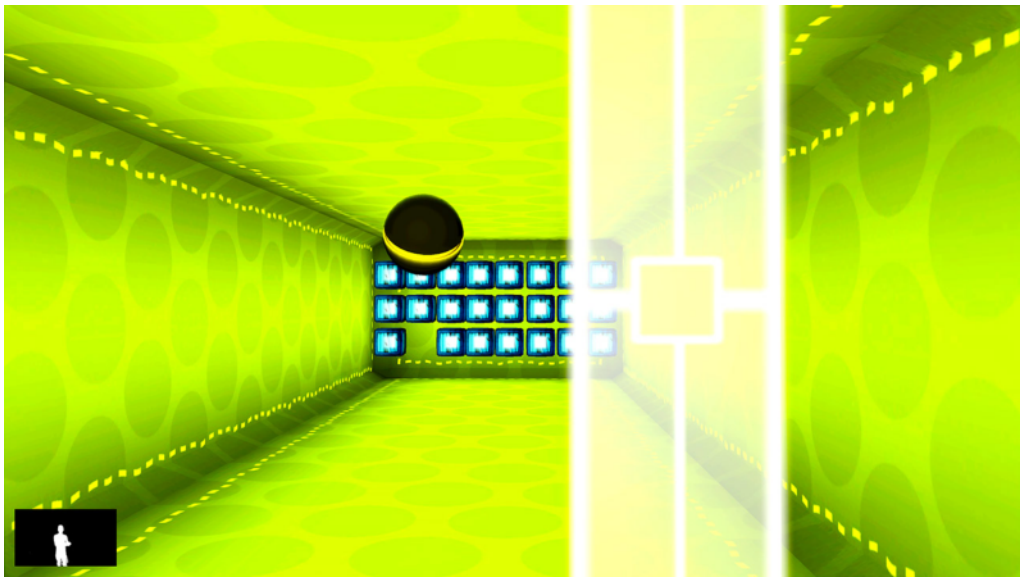
OBJECTIVES

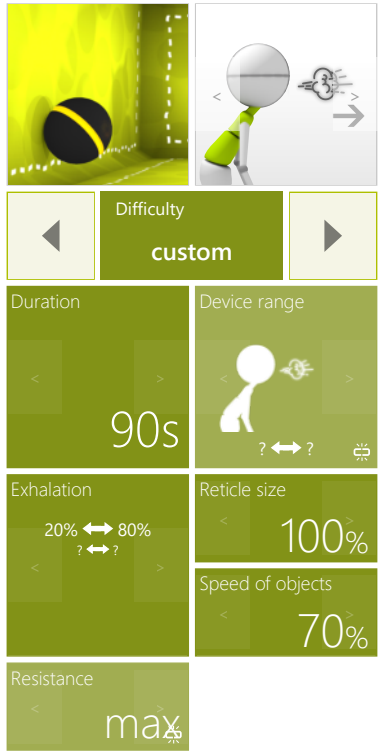
- Dynamics of planned movements
- Predicting the trajectory of objects in 3D space
- Visual motor coordination

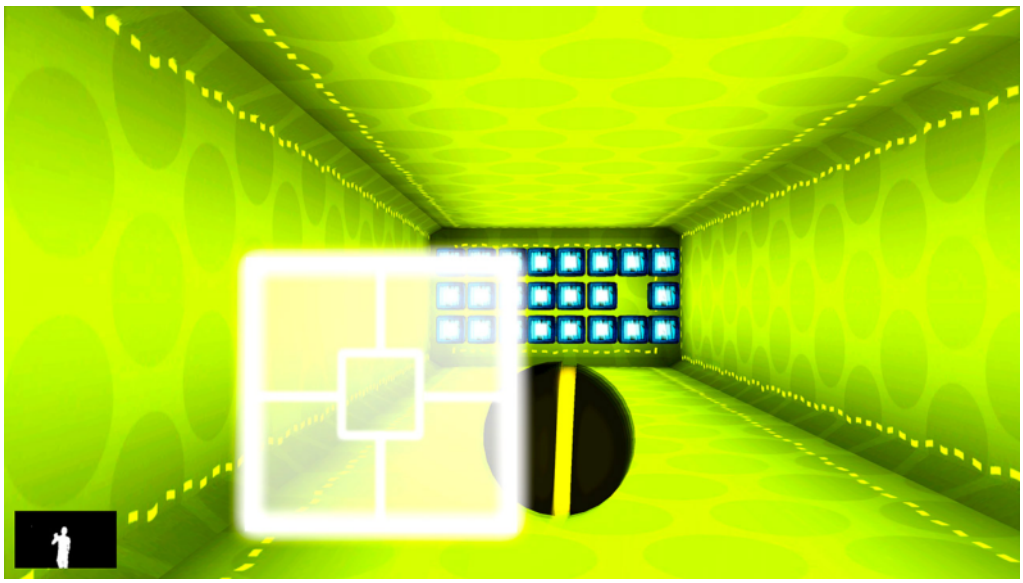
INSTRUCTION FOR PATIENT

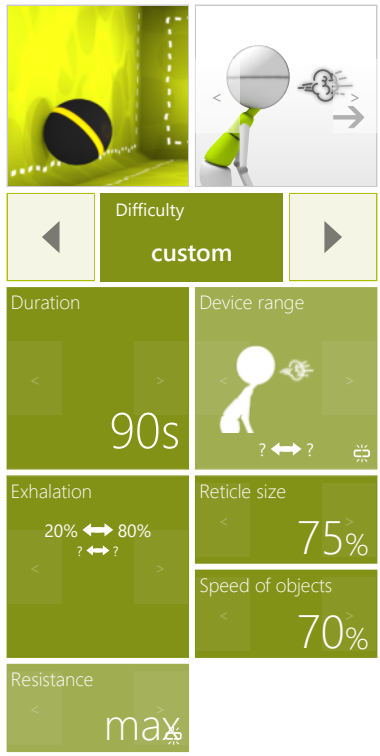
Destroy as many boxes as you can.

SAMPLE SETTINGS







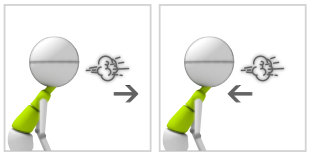


FUNCTIONAL MOVEMENTS

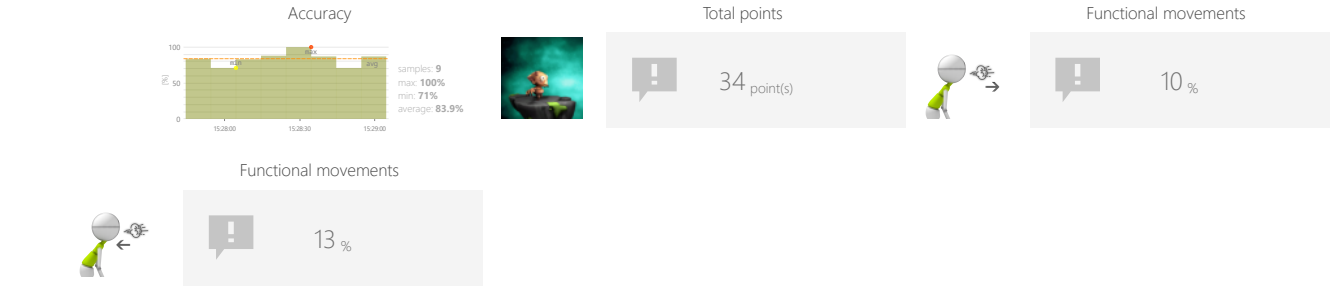
ROCKET JUMPING

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Time between objects
- Bomb format
- Speed of objects
- Resistance

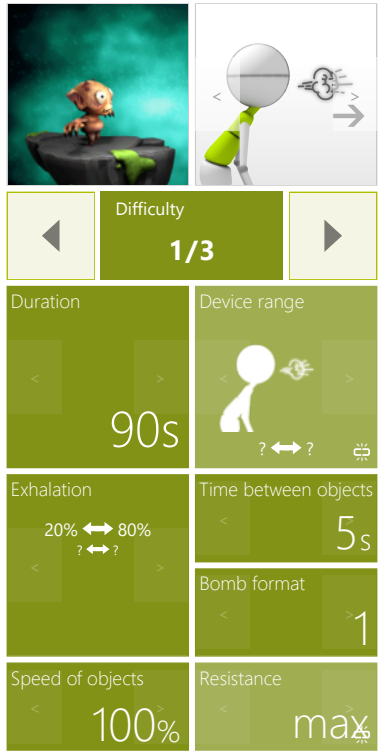
OBJECTIVES

- Spontaneous movements
- Dynamic responses to emerging moving targets
- Predicting the trajectory of objects

INSTRUCTION FOR PATIENT

Help the creature jump over incoming rockets and avoid being hit.

SAMPLE SETTINGS



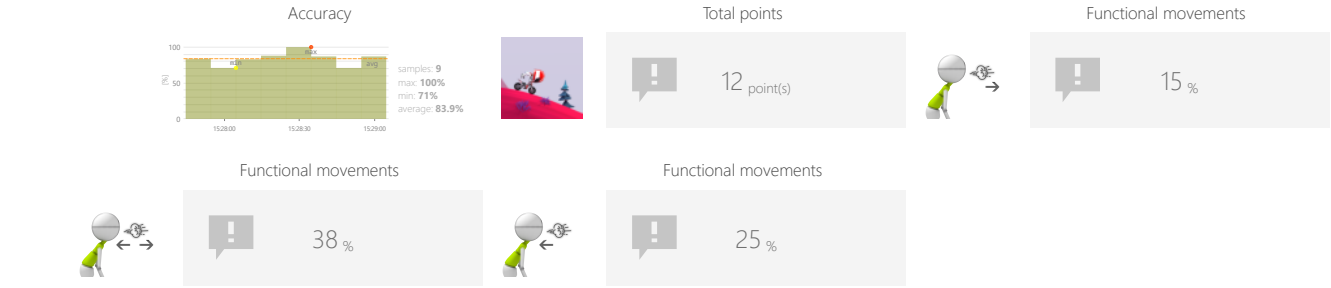
FUNCTIONAL MOVEMENTS

MOTOCROSS

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Task duration
- Resistance
- Route shape

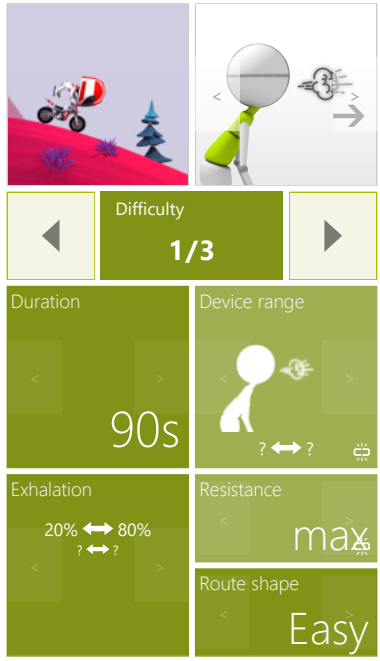
OBJECTIVES

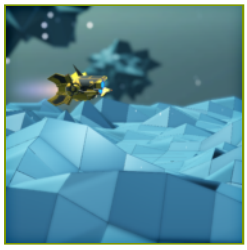
- Dynamics of planned movements
- Planning and Strategy

INSTRUCTION FOR PATIENT

Accelerate and brake to cover the entire route as quickly as possible without tipping.

SAMPLE SETTINGS





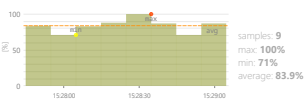
FUNCTIONAL MOVEMENTS

GEOMETRY FLIER

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



Total points

34 point(s)

Functional movements

27 %

ADJUSTMENTS

- Speed
- Task duration
- Resistance

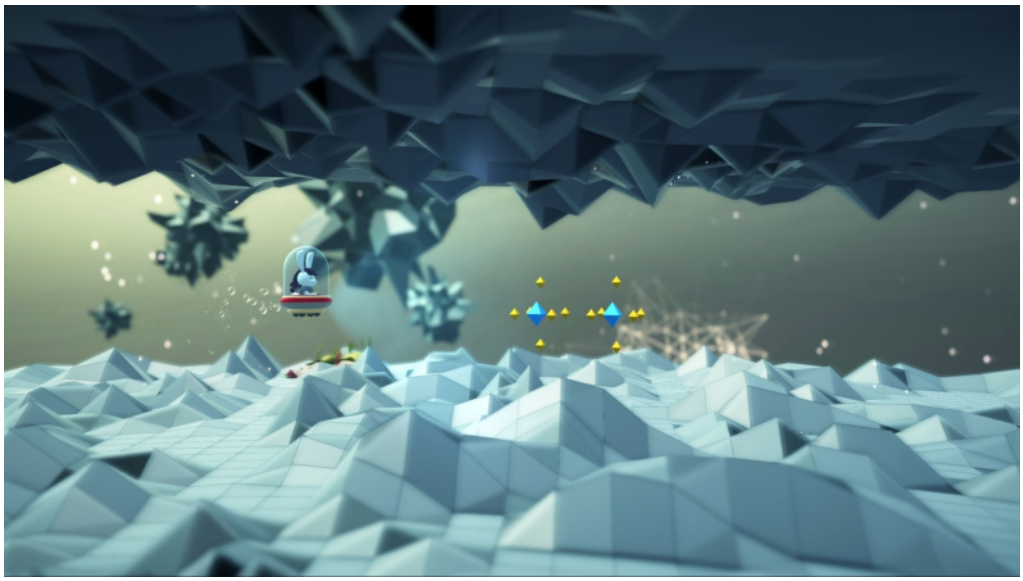
OBJECTIVES

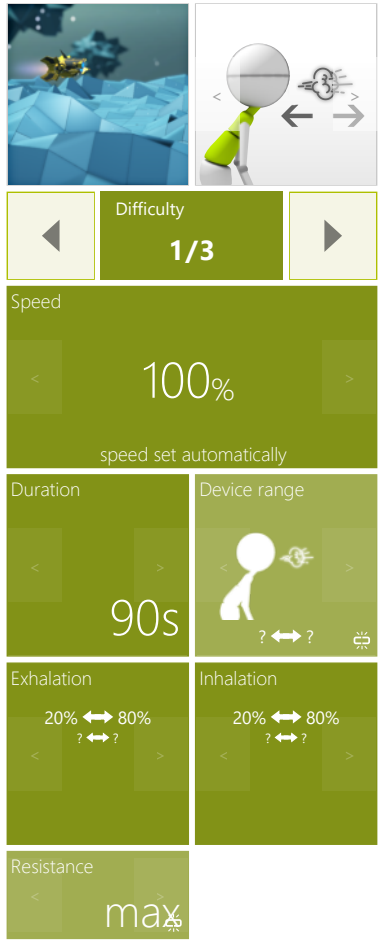
- Dynamics of planned movements
- Activity in a given rhythm
- Visual motor coordination

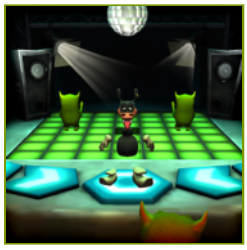
INSTRUCTION FOR PATIENT

Control the vehicle to avoid the obstacles.

SAMPLE SETTINGS







FUNCTIONAL MOVEMENTS

DANCEMAN

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS

Accuracy

Total points

17 point(s)

Functional movements

39 %

ADJUSTMENTS

- Task duration
- Advanced scoring
- Song index
- Resistance
- Spawn rate level

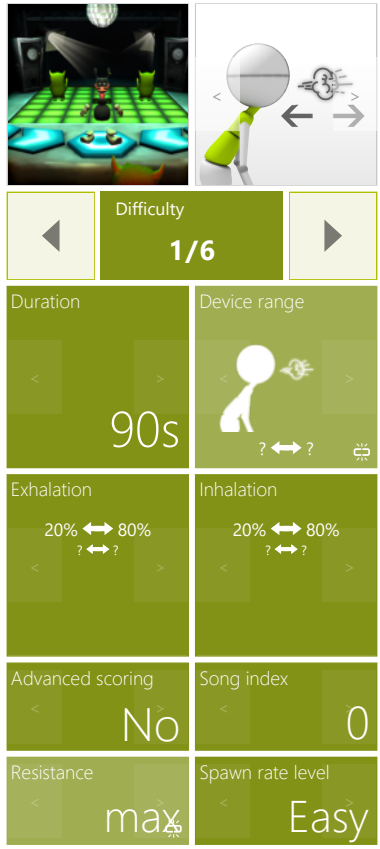
OBJECTIVES

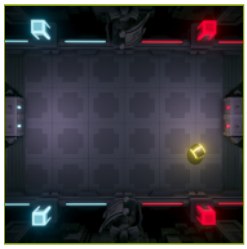
- Activity in a given rhythm
- Spontaneous movements
- Visual motor coordination

INSTRUCTION FOR PATIENT

Hit the green characters when they come close.

SAMPLE SETTINGS





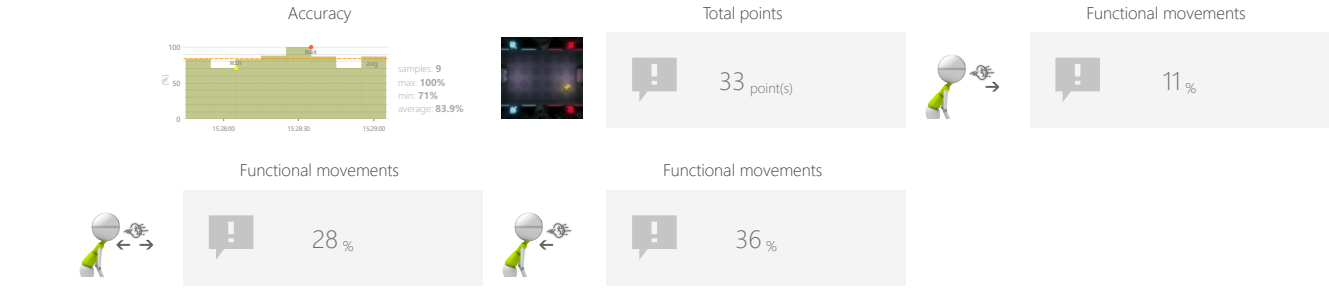
FUNCTIONAL MOVEMENTS

PONG

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

CONTROL MODES

RESULTS



ADJUSTMENTS

- Task duration
- Speed of objects
- Resistance

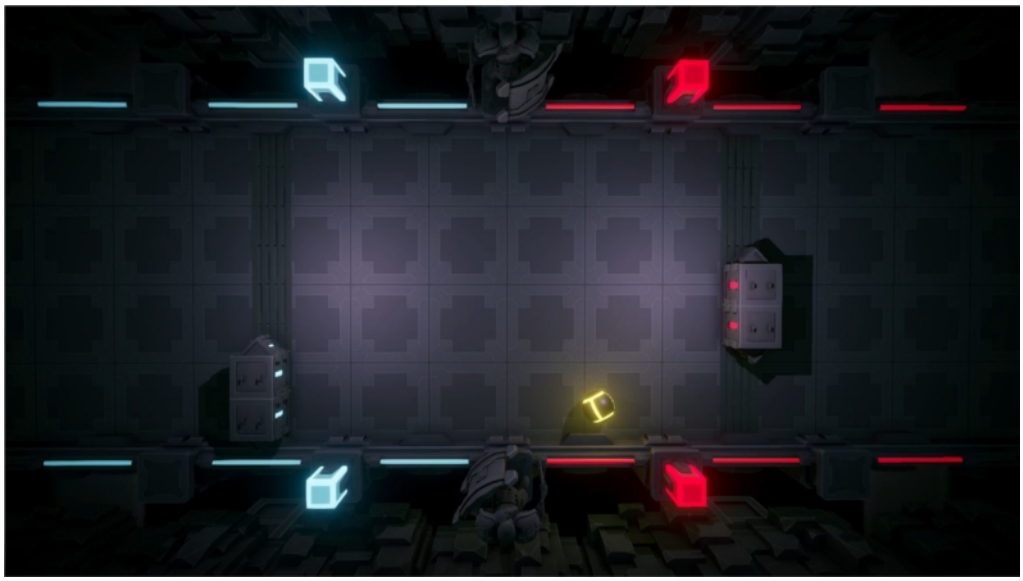
OBJECTIVES

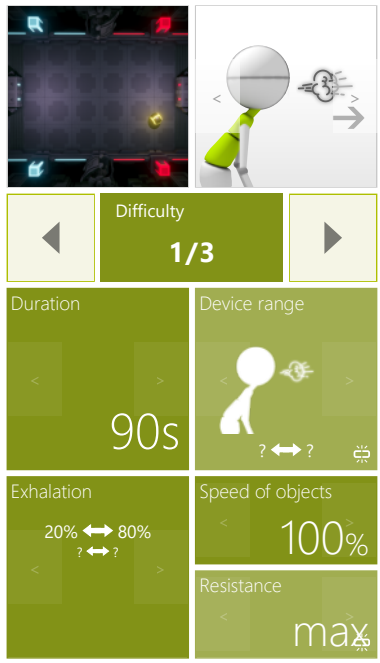
- Planned movements
- Focusing
- Predicting the trajectory of objects

INSTRUCTION FOR PATIENT

Use the paddles to hit a ball back and forth.

SAMPLE SETTINGS



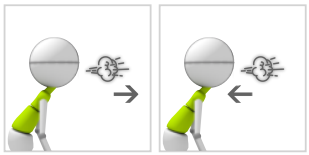


STRENGTH

STRENGTH TEST

Measure and gently motivate to increase individual's force while performing predefined movement patterns.

CONTROL MODES



ADJUSTMENTS

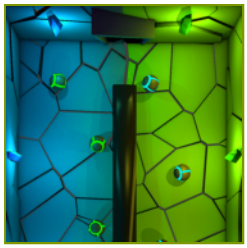
- Time to complete action
- Resistance

OBJECTIVES

- Strength examination
- Muscle strengthening

INSTRUCTION FOR PATIENT

Try to achieve best result

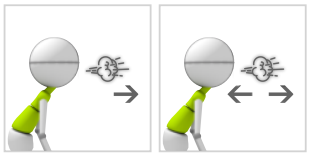


DIVIDED ATTENTION

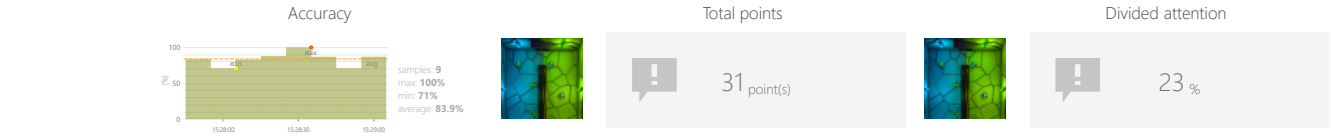
SORTER

Measure and train individual's skills to successfully execute more than one action at a time, while paying attention to two or more channels of information.

CONTROL MODES



RESULTS



ADJUSTMENTS

- Task duration
- Number of objects
- Gap size
- Speed of objects
- Resistance

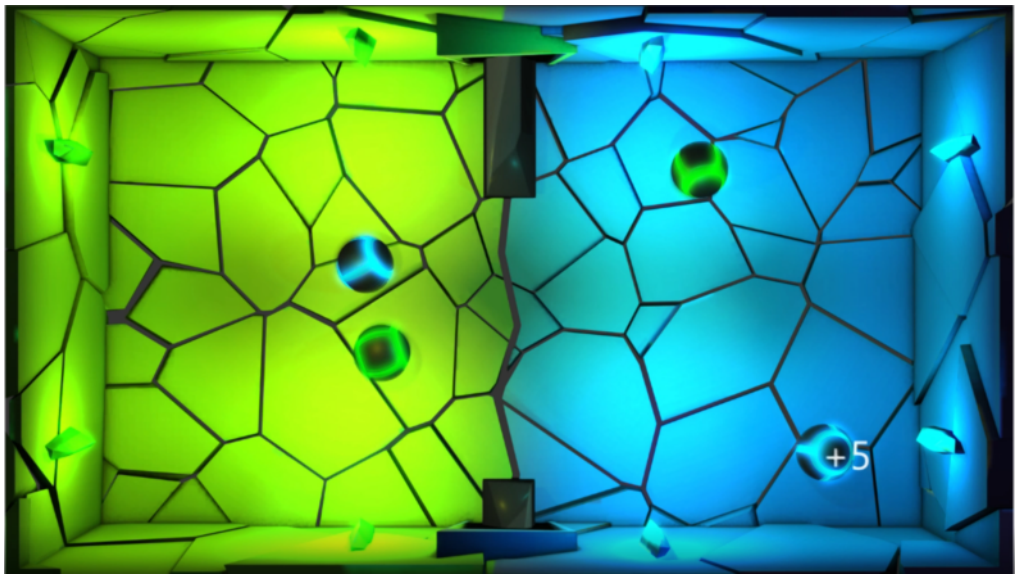
OBJECTIVES

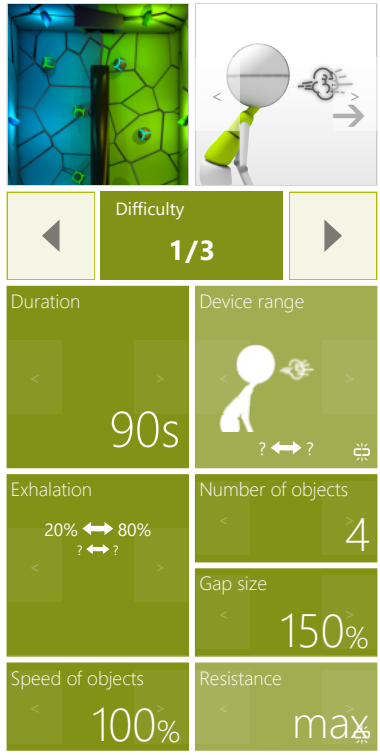
- Predicting the trajectory of objects
- Focusing
- Perceptivity
- Movement precision
- Exercise with or without support from healthy limb

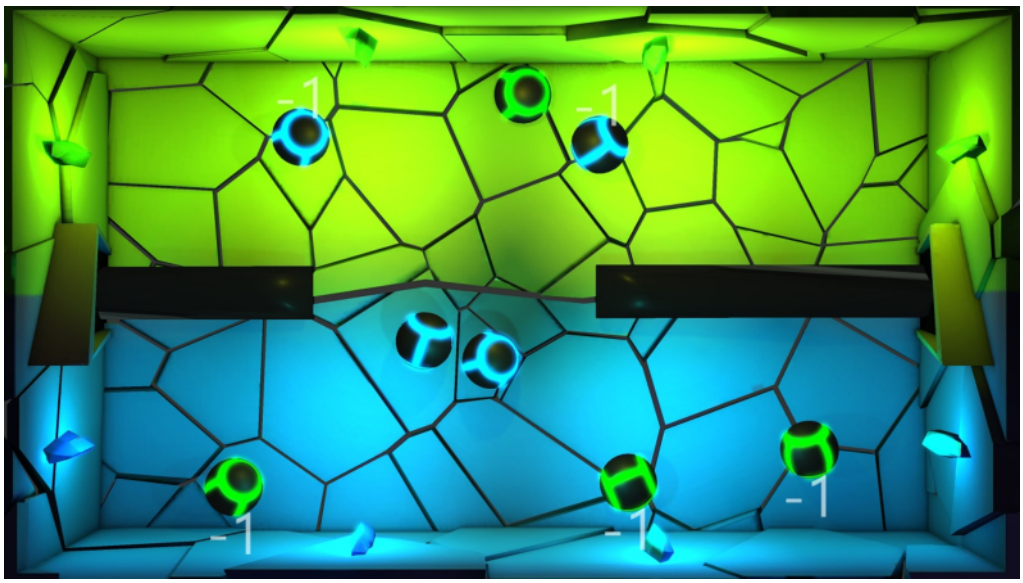
INSTRUCTION FOR PATIENT

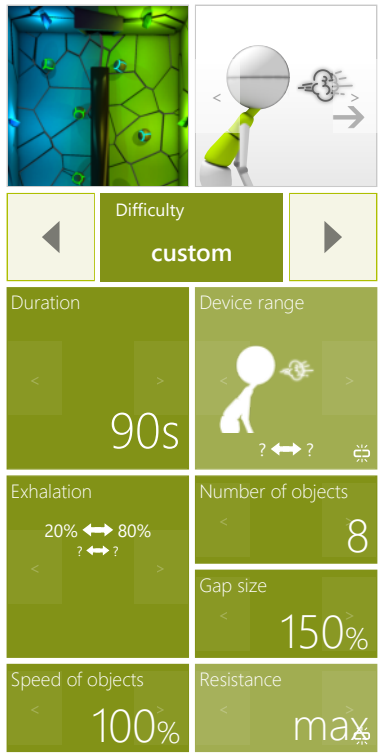
Pass or block the balls so that the blue balls are on the blue side and the green balls are on the green side of the screen.

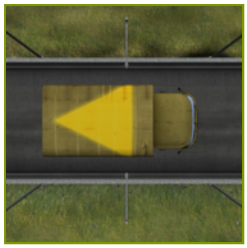
SAMPLE SETTINGS











MEMORY

TRUCKS

Measure and train individual's skills to memorize information.

CONTROL MODES

RESULTS

Number of repetitions

Accuracy

Total points

25 point(s)

Memory

13 %

ADJUSTMENTS

- Task duration
- Resistance
- Variations

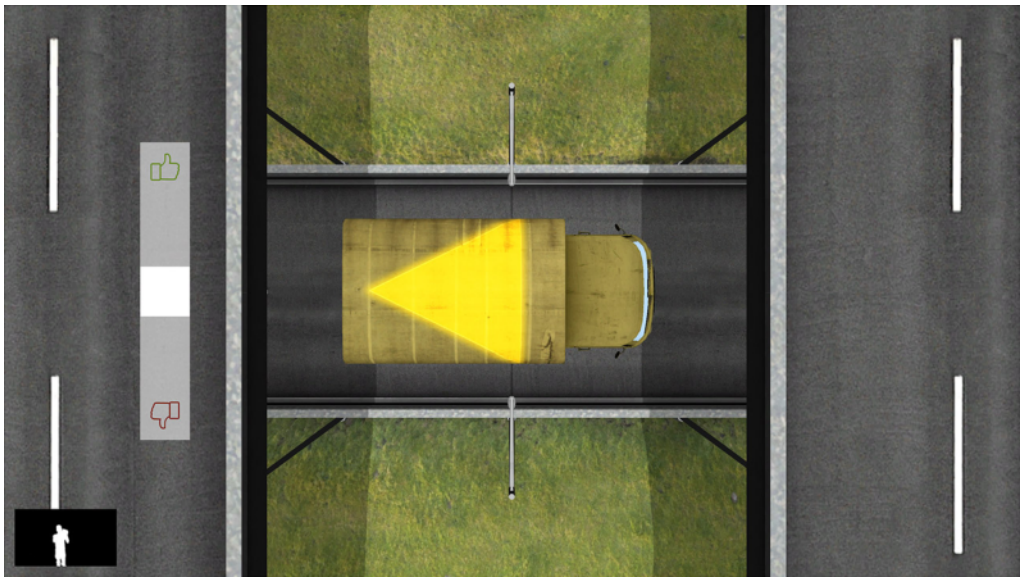
OBJECTIVES

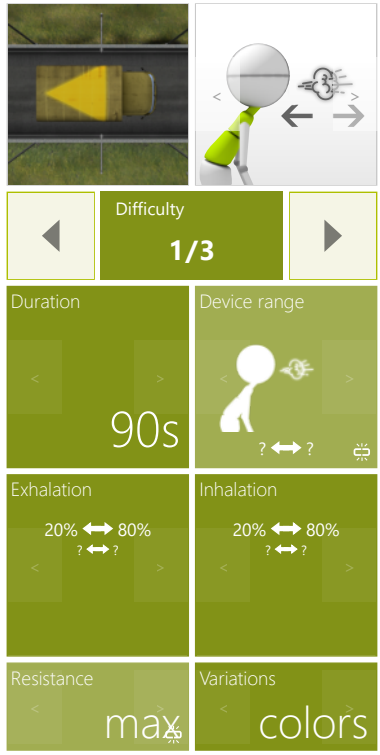
- Logical tasks
- Focusing
- Perceptivity

INSTRUCTION FOR PATIENT

Remember the shape and/or its color on the roof of the car you see. Decide with thumbs up or down whether the next car has the same shape and/or color on the roof as the previous one.

SAMPLE SETTINGS





PROBLEM SOLVING

CLONES

Measure and train individual's skills to reach a solution of specific problems. Problem solving may include mathematical or systematic operations and can be a gauge of an individual's critical thinking skills.

CONTROL MODES

RESULTS

Accuracy

Total points

10 point(s)

Problem solving

29 %

ADJUSTMENTS

- Task duration
- Time to complete action
- Number of pairs
- Resistance

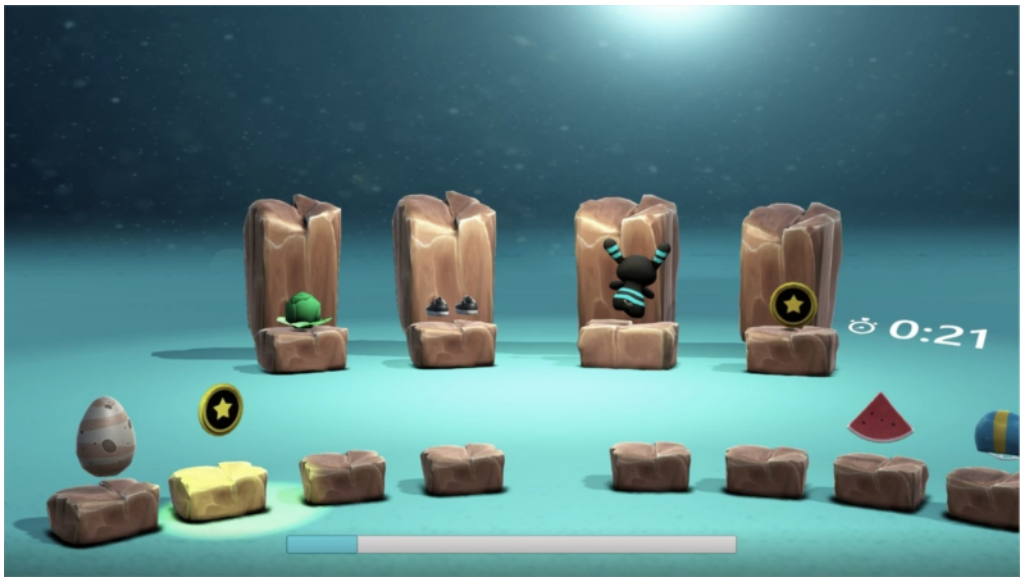
OBJECTIVES

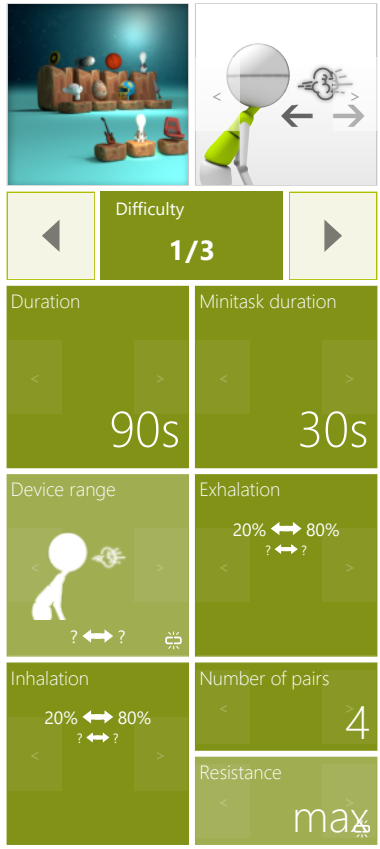
- Perceptivity
- Visual motor coordination
- Logical tasks

INSTRUCTION FOR PATIENT

Select the item which has a pair on the screen.

SAMPLE SETTINGS





SPECIALIZED

BLOOD PRESSURE

Specialized tasks and evaluations that collect data from multiple categories or do have a unique objectives.

CONTROL MODES

ADJUSTMENTS

- Resistance

OBJECTIVES

- Monitor external parameters

INSTRUCTION FOR PATIENT

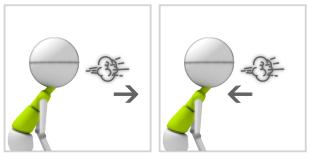
Measure yourself your blood pressure and type it in the result.

SPECIALIZED

GONOGO TEST

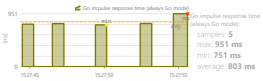
Specialized tasks and evaluations that collect data from multiple categories or do have a unique objectives.

CONTROL MODES



RESULTS

Always Go mode



Number of Go impulses missed (always Go mode)

0

Go or NoGo mode

Number of NoGo impulses hit (Go or NoGo mode)

2

Number of NoGo impulses noticed (Go or NoGo mode)

4

Number of Go impulses missed (Go or NoGo mode)

1

Time delay caused by distraction

37 %

Always Go mode

3000 ms

Go or NoGo mode

Go or NoGo mode

Go or NoGo mode

3032 ms

ADJUSTMENTS

- Required proper repetitions
- Triggering mechanism (rule-based, visual, or auditory)
- Resistance

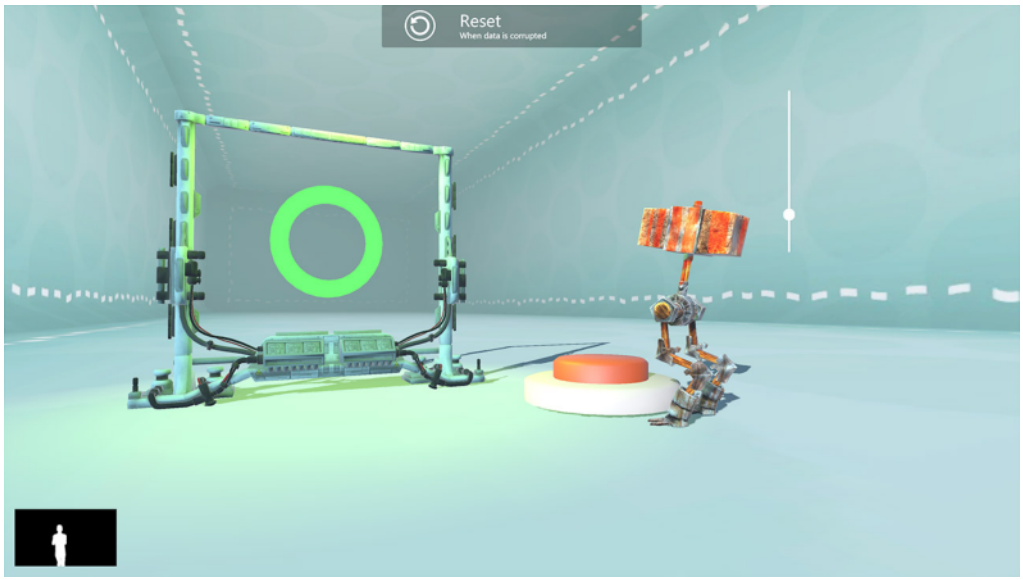
OBJECTIVES

- Spontaneous movements
- Speed of movement
- Response to negative visual stimuli
- Reaction to the positive visual stimuli

INSTRUCTION FOR PATIENT

Hit the button when positive trigger appears.

SAMPLE SETTINGS



Device range

? ? ?

Exhalation

20% 80%

? ? ?

Required proper repetitions

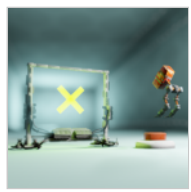
5

Hit if

color is green

Resistance

max



Device range

? ? ?

Exhalation

20% 80%

? ? ?

Required proper repetitions

5

Hit if

number is > 5

Resistance

max