

Neuro Visual Assessment and Therapies

Chief complaints frequently reported:

- Patient often does not perform to their potential
- Patient frequently makes reversal errors in reading or writing
- Patient often loses their place when reading
- Patient is unable to finish work within allotted time
- Patient shows signs of distractibility or a short attention span
- Patient has difficulty copying from the blackboard

Signs and symptoms related to Visual-Efficiency deficits

Ocular Motor Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Struggle to smoothly follow moving objects with eyes				
Eyes feel tired or strained after reading				
Often skip words or reverse letters while reading				
Lose your place while reading				
Turn your head excessively while reading				
Omit words or skip lines while reading				
Find it hard to understand or remember what you read				

Therapies

ACCOMMODATION AND CONVERGENCE

<i>Low Tech</i>	<i>High Tech</i>
Near Far Hart Charts	HTS- Accommodation Facility
Brocks String	Synaptic- Near Far
Vectograms	HTS- Autoslide vergence
	Synaptic- Depth Perception, Near Far

EYE TRACKING

<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game

EYE ALIGNMENT

<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of the mirror	MIT and after image
Prisms	Right Eye- all programs

VOR	
DEPTH PERCEPTION	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	Dynavision
Patient reaches out and touch various targets held by a therapist at various distances	HTS- vergence programs
Ball toss/catch with various size balls at various distances	Synaptic-Near Far, then Depth Perception
Brocks String	Neurotracker- Sustain, Core, Opti-flow
Projected Quoits	
DIVERGENCE	
<i>Low Tech</i>	<i>High Tech</i>
Bi-nasal occlusion	Dynavision- peripheral work
Brocks String	HTS- Vergence programs
Far Hart Charts	Synaptic- Depth Perception standing at a 10-foot distance
Projected Quoits	
Vectograms	
FIXATION ABILITY	
<i>Low Tech</i>	<i>High Tech</i>
Loras Card	Synaptic-Visual Perception
Space Fixator	Pursuits
Flashlight Tag	Jump
Brocks String	Omninet- visual memory
VOR	Dynavision- with numbers, words, or letters in the scope
	Neurotracker- Sustain, Core, Dynamic

Accommodative Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Experience visual blur or fluctuation in vision when looking at things up close				
Eye hurt, burn, or feel tired when reading				
Headaches while reading or doing close up work				
Eyes feel fatigued after reading for a while				
Rub, blink or tear up excessively while reading				
Intermittent blur of distance vision after doing near point activities				

Therapies

ACCOMMODATION AND CONVERGENCE	
<i>Low Tech</i>	<i>High Tech</i>
Near Far Hart Charts	HTS- Accommodation Facility
Brocks String	Synaptic- Near Far
Vectograms	HTS- Autoslide vergence
	Synaptic- Depth Perception, Near Far

Binocular Dysfunction/Vergence Deficiencies

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Intermittent double vision				
Re-reading the same line of words				
Close or cover one eye while reading				
Difficulty aligning columns of numbers				
Letters appear to float, jump off the page, or move around while reading				
Headaches or ocular fatigue with near work				
Head tilt or turn when reading or focusing on tasks				
Double vision				
Struggle with judging depth or spatial judgements				
Eyes feel watery or tired after reading				

Therapies

EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of the mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
DIVERGENCE	
<i>Low Tech</i>	<i>High Tech</i>
Bi-nasal occlusion	Dynavision- peripheral work
Brocks String	HTS- Vergence programs
Far Hart Charts	Synaptic- Depth Perception standing at a 10-foot distance
Projected Quoits	
Vectograms	

Signs and symptoms related to Vision processing deficits

Vision-vestibular integration problems, visual-motor integration problems, spatial coordination dysfunction, disturbance of body image, difficulty sustaining visual attention.

Bilateral Integration in Vision Information Processing

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Lack of coordination and balance				
Difficulty sitting or standing still				
Appears clumsy, frequently falling or bumping into things				
Poor athletic performance				

Therapies

EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of the mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
DIVERGENCE	
<i>Low Tech</i>	<i>High Tech</i>
Bi-nasal occlusion	Dynavision- peripheral work
Brocks String	HTS- Vergence programs
Far Hart Charts	Synaptic- Depth Perception standing at a 10-foot distance
Projected Quoits	
Vectograms	
EYE-HAND COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction

Laterality and Direction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Difficulty learning right from left				
Reverse letters and words or read from right to left				
Confuse directions				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of the mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
ANTICIPATION TIMING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended Ball	Dynavision- reaction programs
Ball toss/catch	Makoto Towers
Bal-A-Vis-X	Synaptic- Go No Go, Jump
Hart Chart with metronome	Our Visual Brain: Kapow
	Right Eye: Asteroid, Solar System, Bubble blast
FOCUSING AND TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts
Letter find on swinging Marsden ball	Rehacom- Word Memory
Trail Making Charts	Synaptic- Pursuits, Multi-object tracking
Sequential Tracker	Neurotracker- Core, Sustain, Dynamic, Opti-flow

SPEED AND SPAN OF RECOGNITION

<i>Low Tech</i>	<i>High Tech</i>
2 ball (2 different colors) toss-pt catches particular color called out by trainer as balls are tossed	Dynavision/T-scope- Reaction programs
	Synaptic- Visual Perception
	SVI- Tachistoscope

Visual Discrimination

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Confuse likeness and differences, mistaking words with similar beginnings and endings				
Struggle with alphabet recognition				
Overygeneralize when classifying objects				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	
FOCUSING AND TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts
Letter find on swinging Marsden ball	Rehacom- Word Memory
Trail Making Charts	Synaptic- Pursuits, Multi-object tracking
Sequential Tracker	Neurotracker- Core, Sustain, Dynamic, Opti-flow
SPEED AND SPAN OF RECOGNITION	
<i>Low Tech</i>	<i>High Tech</i>
2 ball (2 different colors) toss-pt catches particular color called out by trainer as balls are tossed	Dynavision/T-scope- Reaction programs
	Synaptic- Visual Perception
	SVI- Tachistoscope

Visual Figure-Ground

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Difficulty finishing work due to trouble discriminating relevant vs irrelevant information				
Works slowly compared to peers				
Perseverate on details of current work				

Therapies

FOCUSING AND TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts
Letter find on swinging Marsden ball	Rehacom- Word Memory
Trail Making Charts	Synaptic- Pursuits, Multi-object tracking
Sequential Tracker	Neurotracker- Core, Sustain, Dynamic, Opti-flow

Visual Closure

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Ignore details in visual tasks, leading to incomplete work				
Poor comprehension during visual tasks				

Therapies

CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	
VISUALIZATION	
<i>Low Tech</i>	<i>High Tech</i>
Rush Hour	SVI Geoboard
Color Cubes	Synaptic Visual Perception
3D I Spy (finding cards based on written definition)	Rehacom- Physiological memory, 3D Spatial Relations
Parquetry	Omninet- Visual Memory

Visual Memory and Sequencing

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Poor spelling skills				
Struggle with math concepts				
Difficulty visualizing what is read				
Whisper to themselves during reading				
Poor recall of visually presented tasks				

Therapies

VISUAL MEMORY	
<i>Low Tech</i>	<i>High Tech</i>
Parquetry	Omninet Visual Memory
Patient describes placement of items in a room in his/her home or lists events of his/her day in order of occurrence	Dynavision with words, numbers or letters in scope
	SVI Tachistoscope, Geoboard
	Our Visual Brain Visual Memory
	Rehacom Word Memory
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	

Visual Motor Integration

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Sloppy writing and drawing skills				
Struggle with spacing and staying on lines when writing				
Responds orally but have difficulty producing answers on paper				
Difficulty completing written work in the allotted time				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE-HAND COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction
EYE-HAND/BODY/FOOT COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Tandem walk forward/Backward while tapping peripheral targets on left and right	Dynavision with step-ups
Step ups/side lunges with ball toss/catch	Synaptic- Jump or Pursuits programs with side lunges off bosu ball
Infinity walk with ball toss/catch	Makoto Towers

Auditory-Visual Integration

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Poor spelling ability				
Struggle to read phonetically				
Difficulty relating symbols to their sounds				

Therapies

ANTICIPATION TIMING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended Ball	Dynavision- reaction programs
Ball toss/catch	Makoto Towers
Bal-A-Vis-X	Synaptic- Go No Go, Jump
Hart Chart with metronome	Our Visual Brain: Kapow
	Right Eye: Asteroid, Solar System, Bubble blast
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	
INITIATION/VISUAL REACTION SPEED	
<i>Low Tech</i>	<i>High Tech</i>
Bal a vis x- One or two bean bag toss/catch	Makoto Towers- all programs
Ball toss/catch from various distances, heights and angles	Cardio Wall- Clear out, Chaser
	Dynavision- reaction programs including right hand tap red, left hand tap green
	Rehacom- Divided Attention, Alertness Training, Restoration Training, Reaction Behavior
VISUAL REACTION TIME/INITIATION SPEED	
<i>Low Tech</i>	<i>High Tech</i>
Dash to cone and retrieve specified object from a bucket	Dynavision- reactive programs
Peripheral scarf drop or ball drop	Fit Lights
	Cardio Wall
	Makoto Towers

Gaze Stabilization Dysfunction

Visual and Vestibular Issues

Assessment

	Never	Rarely	Frequently	Always
Involuntary eye movements when trying to keep your eyes steady				
Experience dizziness with motion in the background				
Stiff neck or experience frequent headaches				
Manual therapy provides temporary relief from headache pain				
Trouble with reading				
Hard time driving in busy traffic				
Startle more easily				

Therapies

EYE ALIGNMENT	
Low Tech	High Tech
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
DYNAMIC ACUITY	
Low Tech	High Tech
Rope Pull with letter/number chart	Cardio wall with letter chart
Hart Chart with Infinity Walk	Synaptic pursuits "C" while on stationary rower
4 corners chart with toe tap to dyna disc	Makoto towers with X Trainer chart
Head turn left/right to targets with tandem walk	Dynavision with numbers, letters, words in the scope
Small Stroop chart on stationary bike	
EYE TRACKING	
Low Tech	High Tech
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
FIXATION ABILITY	
Low Tech	High Tech
Loras Card	Synaptic-Visual Perception, Pursuits, Jump
Space Fixator	Omninet- visual memory
Flashlight Tag	Dynavision- with numbers, words or letters in scope

Brocks String	Neurotracker- Sustain, Core, Dynamic
VOR	
FOCUSING AND TRACKING	
Low Tech	High Tech
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts
Letter find on swinging Marsden ball	Rehacom- Word Memory
Trail Making Charts	Synaptic- Pursuits, Multi-object tracking
Sequential Tracker	Neurotracker- Core, Sustain, Dynamic, Opti-flow
FOCUSING AND TRACKING	
Low Tech	High Tech
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts

Optokinetic Nystagmus (OKN) Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Trouble functioning in busy environments				
Experience anxiety in crowds				
Feel slight inner anxiety or shakiness for no apparent reason				
Trouble driving fast with other cars around you				
Experience dizziness that comes for no apparent reason				
Feel fatigued while scrolling on the computer				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	

Pursuits and Saccadic Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Have trouble following moving objects with your eyes				
Develop tightness in your neck for no apparent reason with visual demands				
Feel like you miss targets when moving your eyes quickly				
Tire easily when reading or driving				
Feel more clumsy than usual				
Difficulty knowing where you are in space				
Feel slower with cognition or motor movements				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE-HAND COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction

Vestibular Ocular Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Feel dizzy when moving your head back and forth				
Trouble looking over your shoulder while driving				
Trouble reading signs when walking fast				
Feel dizzy when moving your head up and down				
Issues turning left and right quickly				
Experience motion sickness more easily than usual				

Therapies

EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game

Cervical Spine Integration

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Traumatic whiplash incident (<i>yes or no</i>)				
Pain in your neck refer into your head or arms				
Neck stiff and tight				
Feel foggy or dizzy when you move your neck				
Experience improvements in pain with manual therapies				
Tightness or pain in your neck when using your eyes				
Improvements in visual symptoms with manual therapy				

Therapies

EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
ANTICIPATION TIMING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended Ball	Dynavision- reaction programs
Ball toss/catch	Makoto Towers
Bal-A-Vis-X	Synaptic- Go No Go, Jump
Hart Chart with metronome	Our Visual Brain: Kapow
	Right Eye: Asteroid, Solar System, Bubble blast
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	
EYE MOTILITY	
<i>Low Tech</i>	<i>High Tech</i>
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	

EYE-HAND COORDINATION

<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction

FIXATION ABILITY

<i>Low Tech</i>	<i>High Tech</i>
Loras Card	Synaptic-Visual Perception, Pursuits, Jump
Space Fixator	Omninet- visual memory
Flashlight Tag	Dynavision- with numbers, words or letters in scope

STRESS EFFECT

<i>Low Tech</i>	<i>High Tech</i>
Bi-nasal occlusion	Brain Tap
Peripheral work with suspended ball	Dynavision (peripheral work)
Prisms	PEMF
	Sonix

Frontal Lobe Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Difficulty planning, organizing, or completing tasks				
Experience problems with attention and concentration				
Changes in your ability to make decisions or solve problems				
Trouble controlling impulses or exhibit socially inappropriate behavior				
Hard to initiate activities or feel a lack of motivation				
Experience changes in your ability to regulate emotions or exhibit mood swings				

Therapies

ANTICIPATION TIMING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended Ball	Dynavision- reaction programs
Ball toss/catch	Makoto Towers
Bal-A-Vis-X	Synaptic- Go No Go, Jump
Hart Chart with metronome	Our Visual Brain: Kapow
	Right Eye: Asteroid, Solar System, Bubble blast
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	
INITIATION/VISUAL REACTION SPEED	
<i>Low Tech</i>	<i>High Tech</i>
Bal a vis x- One or two bean bag toss/catch	Makoto Towers- all programs
Ball toss/catch from various distances, heights and angles	Cardio Wall- Clear out, Chaser
	Dynavision- reaction programs including right hand tap red, left hand tap green
	Rehacom- Divided Attention, Alertness Training, Restoration Training, Reaction Behavior
VISUAL REACTION TIME/INITIATION SPEED	
<i>Low Tech</i>	<i>High Tech</i>
Dash to cone and retrieve specified object from a bucket	Dynavision- reactive programs

Peripheral scarf drop or ball drop	Fit Lights
	Cardio Wall
	Makoto Towers

FOCUSING AND TRACKING

<i>Low Tech</i>	<i>High Tech</i>
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts
Letter find on swinging Marsden ball	Rehacom- Word Memory
Trail Making Charts	Synaptic- Pursuits, Multi-object tracking
Sequential Tracker	Neurotracker- Core, Sustain, Dynamic, Opti-flow
FOCUSING AND TRACKING	
Low Tech	High Tech
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts

VISUALIZATION

<i>Low Tech</i>	<i>High Tech</i>
Rush Hour	SVI Geoboard
Color Cubes	Synaptic Visual Perception
3D I Spy (finding cards based on written definition)	Rehacom- Physiological memory, 3D Spatial Relations
Parquetry	Omninet- Visual Memory

VISUAL MEMORY

<i>Low Tech</i>	<i>High Tech</i>
Parquetry	Omninet Visual Memory
Patient describes placement of items in a room in his/her home or lists events of his/her day in order of occurrence	Dynavision with words, numbers or letters in scope
	SVI Tachistoscope, Geoboard
	Our Visual Brain Visual Memory
	Rehacom Word Memory

Parietal Lobe Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Difficulty distinguishing left from right				
Problems with spatial awareness, such as bumping into objects or getting lost easily				
Challenging to perform tasks that require hand-eye coordination				
Trouble recognizing objects by touch (tactile agnosia)				
Difficulty with reading, writing, or math (acalculia)				
Issues with drawing or constructing objects (constructional apraxia)				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
DEPTH PERCEPTION	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	Dynavision
Patient reaches out and touch various targets held by a therapist at various distances	HTS- vergence programs
Ball toss/catch with various size balls at various distances	Synaptic-Near Far, then Depth Perception
Brocks String	Neurotracker- Sustain, Core, Opti-flow
Projected Quoits	
DIVERGENCE	
<i>Low Tech</i>	<i>High Tech</i>
Bi-nasal occlusion	Dynavision- peripheral work
Brocks String	HTS- Vergence programs
Far Hart Charts	Synaptic- Depth Perception standing at a 10-foot distance
Projected Quoits	
Vectograms	
DYNAMIC ACUITY	
<i>Low Tech</i>	<i>High Tech</i>
Rope Pull with letter/number chart	Cardio wall with letter chart
Hart Chart with Infinity Walk	Synaptic pursuits "C" while on stationary rower

4 corners chart with toe tap to dyna disc	Makoto towers with X Trainer chart
Head turn left/right to targets with tandem walk	Dynavision with numbers, letters, words in the scope
Small Stroop chart on stationary bike	
EYE MOTILITY	
Low Tech	High Tech
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	
EYE-HAND COORDINATION	
Low Tech	High Tech
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction
EYE-HAND/BODY/FOOT COORDINATION	
Low Tech	High Tech
Tandem walk forward/Backward while tapping peripheral targets on left and right	Dynavision with step-ups
Step ups/side lunges with ball toss/catch	Synaptic- Jump or Pursuits programs with side lunges off bosu ball
Infinity walk with ball toss/catch	Makoto Towers
PERIPHERAL VISION/AWARENESS	
Low Tech	High Tech
Loras Card	Dynavision
Bean Bag toss to peripheral targets on floor	SVI peripheral letter chart
Tandem walk-in hall with hand tap to targets on wall	Synaptic visual perception
Circular toss/catch with suspended ball	Neurotracker
Prism work	

Temporal Lobe Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Difficulty recognizing faces (prosopagnosia)				
Problems with memory, such as trouble recalling recent events				
Difficulty understanding spoken language (receptive aphasia)				
Changes in your ability to identify and interpret sounds				
Unusual or heightened sensitivity to sounds				
Trouble finding the right words when speaking (expressive aphasia)				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	
EYE MOTILITY	
<i>Low Tech</i>	<i>High Tech</i>
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	
EYE-HAND COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall

	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction

FOCUSING AND TRACKING

<i>Low Tech</i>	<i>High Tech</i>
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts
Letter find on swinging Marsden ball	Rehacom- Word Memory
Trail Making Charts	Synaptic- Pursuits, Multi-object tracking
Sequential Tracker	Neurotracker- Core, Sustain, Dynamic, Opti-flow
FOCUSING AND TRACKING	
Low Tech	High Tech
Make infinity pattern in air with right hand then left hand then both hands together, eyes remain on thumb of hand making infinity pattern.	SVI- Rotator, Moving letter charts

VISUALIZATION

<i>Low Tech</i>	<i>High Tech</i>
Rush Hour	SVI Geoboard
Color Cubes	Synaptic Visual Perception
3D I Spy (finding cards based on written definition)	Rehacom- Physiological memory, 3D Spatial Relations
Parquetry	Omninet- Visual Memory

VISUAL MEMORY

<i>Low Tech</i>	<i>High Tech</i>
Parquetry	Omninet Visual Memory
Patient describes placement of items in a room in his/her home or lists events of his/her day in order of occurrence	Dynavision with words, numbers or letters in scope
	SVI Tachistoscope, Geoboard
	Our Visual Brain Visual Memory
	Rehacom Word Memory

STRESS EFFECT

<i>Low Tech</i>	<i>High Tech</i>
Bi-nasal occlusion	Brain Tap
Peripheral work with suspended ball	Dynavision (peripheral work)
Prisms	PEMF
	Sonix

Cerebellar Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Change in balance with your eyes closed				
Feel uncoordinated when walking				
Notice a tremor when reaching for objects				
Injured your back or neck when lifting objects				
Often bump into objects or trip on the stairs				
Changes in speech, such as slurring				
Motion sickness more easily				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE-HAND COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction
EYE-HAND/BODY/FOOT COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Tandem walk forward/Backward while tapping peripheral targets on left and right	Dynavision with step-ups
Step ups/side lunges with ball toss/catch	Synaptic- Jump or Pursuits programs with side lunges off bosu ball
Infinity walk with ball toss/catch	Makoto Towers
INITIATION/VISUAL REACTION SPEED	
<i>Low Tech</i>	<i>High Tech</i>
Bal a vis x- One or two bean bag toss/catch	Makoto Towers- all programs
Ball toss/catch from various distances, heights and angles	Cardio Wall- Clear out, Chaser

	Dynavision- reaction programs including right hand tap red, left hand tap green
	Rehacom- Divided Attention, Alertness Training, Restoration Training, Reaction Behavior

DYNAMIC ACUITY

<i>Low Tech</i>	<i>High Tech</i>
Rope Pull with letter/number chart	Cardio wall with letter chart
Hart Chart with Infinity Walk	Synaptic pursuits "C" while on stationary rower
4 corners chart with toe tap to dyna disc	Makoto towers with X Trainer chart
Head turn left/right to targets with tandem walk	Dynavision with numbers, letters, words in the scope
Small Stroop chart on stationary bike	

EYE MOTILITY

<i>Low Tech</i>	<i>High Tech</i>
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	

FIXATION ABILITY

<i>Low Tech</i>	<i>High Tech</i>
Loras Card	Synaptic-Visual Perception, Pursuits, Jump
Space Fixator	Omninet- visual memory
Flashlight Tag	Dynavision- with numbers, words or letters in scope

Basal Ganglionic Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Dry eyes				
Decreased movement speed				
Notice a slight tremor when your hand is at rest				
Tightness in your shoulders and chest muscles				
Notice a delay in cognitive processing speed				
Increased amount of saliva in your mouth				
Unexplained anxiety and/or trouble with sleep patterns				
Issues digesting food				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE-HAND COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction
EYE-HAND/BODY/FOOT COORDINATION	
<i>Low Tech</i>	<i>High Tech</i>
Tandem walk forward/Backward while tapping peripheral targets on left and right	Dynavision with step-ups
Step ups/side lunges with ball toss/catch	Synaptic- Jump or Pursuits programs with side lunges off bosu ball
Infinity walk with ball toss/catch	Makoto Towers
INITIATION/VISUAL REACTION SPEED	
<i>Low Tech</i>	<i>High Tech</i>
Bal a vis x- One or two bean bag toss/catch	Makoto Towers- all programs

Ball toss/catch from various distances, heights and angles	Cardio Wall- Clear out, Chaser
	Dynavision- reaction programs including right hand tap red, left hand tap green
	Rehacom- Divided Attention, Alertness Training, Restoration Training, Reaction Behavior

DYNAMIC ACUITY

<i>Low Tech</i>	<i>High Tech</i>
Rope Pull with letter/number chart	Cardio wall with letter chart
Hart Chart with Infinity Walk	Synaptic pursuits "C" while on stationary rower
4 corners chart with toe tap to dyna disc	Makoto towers with X Trainer chart
Head turn left/right to targets with tandem walk	Dynavision with numbers, letters, words in the scope
Small Stroop chart on stationary bike	

EYE MOTILITY

<i>Low Tech</i>	<i>High Tech</i>
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	

FIXATION ABILITY

<i>Low Tech</i>	<i>High Tech</i>
Loras Card	Synaptic-Visual Perception, Pursuits, Jump
Space Fixator	Omninet- visual memory
Flashlight Tag	Dynavision- with numbers, words or letters in scope

Brainstem Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Dizziness or balance issues				
Difficulty swallowing or frequent choking				
Notice changes in your speech, such as slurring or hoarseness				
Abnormal eye movements or trouble focusing your eyes				
Unexplained changes in heart rate or breathing patterns				
Weakness or numbness in your face or limbs				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
ANTICIPATION TIMING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended Ball	Dynavision- reaction programs
Ball toss/catch	Makoto Towers
Bal-A-Vis-X	Synaptic- Go No Go, Jump
Hart Chart with metronome	Our Visual Brain: Kapow
	Right Eye: Asteroid, Solar System, Bubble blast
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	

DEPTH PERCEPTION

<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	Dynavision
Patient reaches out and touch various targets held by a therapist at various distances	HTS- vergence programs
Ball toss/catch with various size balls at various distances	Synaptic-Near Far, then Depth Perception
Brocks String	Neurotracker- Sustain, Core, Opti-flow
Projected Quoits	

DYNAMIC ACUITY

<i>Low Tech</i>	<i>High Tech</i>
Rope Pull with letter/number chart	Cardio wall with letter chart
Hart Chart with Infinity Walk	Synaptic pursuits "C" while on stationary rower
4 corners chart with toe tap to dyna disc	Makoto towers with X Trainer chart
Head turn left/right to targets with tandem walk	Dynavision with numbers, letters, words in the scope
Small Stroop chart on stationary bike	

EYE MOTILITY

<i>Low Tech</i>	<i>High Tech</i>
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	

EYE-HAND COORDINATION

<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction

EYE-HAND/BODY/FOOT COORDINATION

<i>Low Tech</i>	<i>High Tech</i>
Tandem walk forward/Backward while tapping peripheral targets on left and right	Dynavision with step-ups
Step ups/side lunges with ball toss/catch	Synaptic- Jump or Pursuits programs with side lunges off bosu ball
Infinity walk with ball toss/catch	Makoto Towers

Insular Dysfunction

Assessment

	<i>Never</i>	<i>Rarely</i>	<i>Frequently</i>	<i>Always</i>
Difficulties with emotional regulation or notice sudden mood swings				
Altered sense of taste or smell				
Challenging to perceive internal bodily states, such as hunger, thirst, or pain				
Trouble recognizing and interpreting your own emotions or the emotions of others				
Unexplained anxiety or panic attacks				
Change in your ability to maintain attention or focus on tasks				

Therapies

EYE TRACKING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	SVI- Rotator
Bal-a-vis-x/ball toss and catch	Synaptic- Pursuits
Sequential Tracker	Multi-object tracking
Scanning Trails chart	Our Visual Brain- Kapow Grid
	Neurotracker- Sustain Core
	Right Eye- Bubble Blast, Astroids game
EYE ALIGNMENT	
<i>Low Tech</i>	<i>High Tech</i>
Eye stretches with clothespins and rings	HTS- vergence programs
Eye pointing in front of mirror	MIT and after image
Prisms	Right Eye- all programs
VOR	
ANTICIPATION TIMING	
<i>Low Tech</i>	<i>High Tech</i>
Suspended Ball	Dynavision- reaction programs
Ball toss/catch	Makoto Towers
Bal-A-Vis-X	Synaptic- Go No Go, Jump
Hart Chart with metronome	Our Visual Brain: Kapow
	Right Eye: Asteroid, Solar System, Bubble blast
CONCENTRATION	
<i>Low Tech</i>	<i>High Tech</i>
Space Fixator	SVI- Tachistoscope
Stroop Chart	Omninet- Visual Memory
Tandem walk	SVI- Geoboard
Infinity walk while reading Hart Chart	Strobe Goggles
Bal-a-vis-x	

DEPTH PERCEPTION

<i>Low Tech</i>	<i>High Tech</i>
Suspended ball	Dynavision
Patient reaches out and touch various targets held by a therapist at various distances	HTS- vergence programs
Ball toss/catch with various size balls at various distances	Synaptic-Near Far, then Depth Perception
Brocks String	Neurotracker- Sustain, Core, Opti-flow
Projected Quoits	

DYNAMIC ACUITY

<i>Low Tech</i>	<i>High Tech</i>
Rope Pull with letter/number chart	Cardio wall with letter chart
Hart Chart with Infinity Walk	Synaptic pursuits "C" while on stationary rower
4 corners chart with toe tap to dyna disc	Makoto towers with X Trainer chart
Head turn left/right to targets with tandem walk	Dynavision with numbers, letters, words in the scope
Small Stroop chart on stationary bike	

EYE FATIGUE

<i>Low Tech</i>	<i>High Tech</i>
Brocks String	Dynavision- lights with numbers/letters/words in scope
Projected Quoits	HTS- Vergence programs
Missing Letter Charts	Rehacom- Divided Attention, 3d Spatial Relations, Attention and Concentration, Vigilance, all Memory programs
Stroop Chart	Strobe Goggles
Vectograms	

EYE MOTILITY

<i>Low Tech</i>	<i>High Tech</i>
Eye Stretches	
Vertical/Horizontal, Diagonal Saccades	
Alternating Hart Charts, 4 corners charts	
Xtrainer chart with Infinity Walk	
Fitz's Fixator	

EYE-HAND COORDINATION

<i>Low Tech</i>	<i>High Tech</i>
Ball toss/catch with Xtrainer chart	Dynavision programs
Ball toss/catch in hallway while tapping peripheral targets	Makoto Towers
Bal-a-vis-x (rhythmic bounce to floor/catch 2 balls with partner)	Cardio Wall
	Strobe Goggles
	SVI- Saccades, Go No Go
	Synaptic- Go No Go, Reaction

EYE-HAND/BODY/FOOT COORDINATION

<i>Low Tech</i>	<i>High Tech</i>
Tandem walk forward/Backward while tapping peripheral targets on left and right	Dynavision with step-ups
Step ups/side lunges with ball toss/catch	Synaptic- Jump or Pursuits programs with side lunges off bosu ball
Infinity walk with ball toss/catch	Makoto Towers