

Integrating Sensory and Motor in Vision Therapy through Reflex Foundations Activities Handout

Mix and Match: Be creative.

- 1) Keep your VT goals in the forefront!
- 2) Determine the Neuro-developmental needs of your patient.
- 3) Determine the VT procedure your patient needs to practice.
- 4) We never completely isolate a reflex when working to integrate it. Reflexes affect other reflexes. The reflexes noted here are emphasized in the activity.
- 5) Determine if it is appropriate to add additional sensory information.
- 6) The suggestions here are to get you thinking creatively while supporting vision development.
- 7) Be creative and have fun!

SUGGESTIONS FOR INCORPORATING VESTIBULAR INPUT IN VISION THERAPY

1. SLOW ROTATIONS:

- Seated on spin board or chair, with legs crossed, eyes closed, arms crossed, fingers holding ears or shoulders, and head down.
- The patient sits in this position for one 60 second turn clockwise. Pausing after the first rotation, then turning counter clockwise for one slow rotation. The patient and therapist do not talk during exercise.
- (Main reflexes involved: Vestibular, Moro, TLR, STNR, ATNR, SG)

2. SLOW ROTATIONS WITH VISUAL MEMORY/ VISUALIZATION:

- Show appropriate number of picture cards. The patient is instructed to look at the pictures for the appropriate amount of time determined by the therapist. During the spin the patient must look at their mental pictures, with closed eyes. When the rotations are completed they can state as many descriptive words as they can think of to describe the images on the cards.
 - Example: 3 pictures could be a baby chick, a train, and a box.
- Alphabetizing picture words adds an auditory component.
- You can also load by alphabetizing by last letter, second letter.
- You could also have them tell you what the pictures were to their size.

3. STANDING ROTATIONS:

- Standing 3 feet in front of fixation target.
- Pt slowly rotates clock wise with their eyes closed.
- When they feel that they have made one complete rotation, they stop and look at the fixation point.
- A correction is made if needed.
- Then the patient closes their eyes and rotates counter clock wise, stopping when they feel they have made a complete rotation.
- A correction is made if needed.
- Once the patient no longer needs to make corrections, a second consecutive rotation is made in each direction.
- Additional rotations are added when patient can stop at starting point consistently, without feeling dizzy.
- The goal is to make 10 rotations in each direction without getting dizzy.
- Use a fusion task for a fixation target: Use Keystone fusion cards or vectogram for fixation target. When the patient stops to look a fixation point, they fuse the target and answer therapist's questions relating to depth.
- For patients with amblyopia or strabismus, dichotic listening with headphones can stimulate eye movements.
- (Main reflexes involved: Vestibular, Moro, TLR, STNR, ATNR, SG)

4. BOSU® BALL:

- Use a BOSU® ball upside right or flip it over.
- Brings feeling and general awareness to various parts of their body: ankles, hips, shoulders, center of gravity.
- Brings awareness of where our body parts are in space.
- Activates the core and stabilizing muscles for balance posture.
- Can be used to load fusional and depth exercises
- Marsden Ball: While maintaining balance on ball, the patient maintains fixation on Marsden ball while performing Greenwald, or bunting exercises.
- With support for safety, have the patient close their eyes and feel their weight shift while standing on the bubble.
- (Main reflexes involved: Vestibular, Moro, TLR, STNR, ATNR, Babinski)

5. THERAPY BALL:

- Brings awareness of where our body parts are in space.
- Activates the core and stabilizing muscles for balance posture.
- Can be used in sitting, supine and prone
 - Sitting:
 - With feet on the ground: provides awareness of feet and hip region.
 - Therapist can encourage rotation through hips: This is important for linking pathways that connect the upper and lower body.
 - Prone
 - With stomach over ball and therapist support for safety, the patient can work to develop head, neck, and trunk elevation.
 - Superior gaze is encouraged.
 - Hands can perform activities on floor, or be raised to reach for items or draw on vertical surface
 - Sitting to supine:
 - If the child is small enough, with support they can curl up in with head, arms, and legs flexed.
 - This is followed by opening up, stretching arms and legs out, and leaning backwards over the ball, so that the hands are stretched out touching the floor.
- Many VT activities can be used with a ball: Try motor Equivalents, stacking blocks with prisms, playing perfection or column jumping in the various positions.
- (Main reflexes involved: Vestibular, Moro, TLR, STNR & SG)

6. VESTIBULAR SWINGS:

- There are a variety of swings available.
- The type of swing you are using will lend itself to performing different tasks.
- Positioning on a swing depends on the type of swing used.
- Vestibular input is one of the core elements of sensory integration therapy.
- Using swings in VT allows the therapist to provide a novel movement experience while working on balance, spatial awareness and positioning.
- Swings can be calming or alerting depending on their use and the patient's level of neurological development.
- Many therapists use swings that allow prone positioning for reaching and throwing at targets.
- An improved vestibular system can help to regulate our behavior.
- Near far focus change can be stimulated.
- Post Rotary Nystagmus can be stimulated.
- Fixation games: The patient can throw a bean bag at the target, hold a flashlight/or laser pointer on the target, or read a chart.
- (Main reflexes involved: Vestibular, FP, Moro, TLR & STNR)

7. ZIP LINES:

- Offer patients a path to overcoming fears, building upper body strength, achieving goals, and provides vestibular input -linear acceleration.
- Can be used to encourage fixation on a central target while experiencing movement.
- Can be used for building Central Peripheral processing: While fixating on a target in the distance the patient names object in his periphery that he is passing by.
- Can be used to stimulate increased speed of accommodative functions as the patient nears the end of the line.
- (Main reflexes involved: Vestibular, FP, Moro & TLR)

8. AIREX BALANCE PADS:

- Can be used in place of balance boards.
- Small and lightweight.
- Provides awareness of center of gravity and body position.
- Most VT activities that require standing could be done on the mat to load the activity.
- Try using the Airex mat when performing saccades, hart chart, Brock string or other fusional exercises.
- (Main reflexes involved: Vestibular, Moro, ATNR & TLR)

9. VIRTUAL REALITY HEADSETS:

- Provides a state of the art VT experience.
- New software/hardware is currently being developed
- Patients can experience vestibular input in the safety of a chair.
- Eye tracking: Look for VR games to stimulate eye tracking.
- (Main reflexes involved: Vestibular, Moro & TLR)

10. SANET VISION INTEGRATOR- BALANCE MODULE

- SVI: loaded with a variety of core vision therapy exercises.
- The balance module provides a visual of weight distribution and objective data.
- You can use the balance function while performing other SVI activities.
- You can use the balance module for free space activities, such as the brock string or fusional exercises.
- (Main reflexes involved: Vestibular, Moro, ATNR & TLR)

SUGGESTIONS FOR INCORPORATING TACTILE IN VISION THERAPY

11. DEEP PRESSURE:

- Squeezing patients under a mat, or squeezing arms and legs can help ground a patient so that they can experience a sense of calm.
- In between VT activities, give the patient a brake and squeeze them under a mat.
- (Main reflexes involved: FP, MR & TLR)

12. FACE AND BODY TAPPING:

- EFT tapping on face and continued tapping down the sides of body, back, legs and arms while talking about life situations can help to change negative thoughts into positive thoughts.
- In supine, perform face and body tapping. Have the patient visualize a positive situation.
- (Main reflexes involved: FP, MR & TLR)

13. HAND AND FOOT MASSAGE:

- Providing hand and foot massage can relax a patient to help integrate hand and foot reflexes.
- Quiet feet help the patient to stand still so that they can fixate on the vision therapy targets.
- May also help patient to relax vergence and accommodation.
- This can be helpful to help with fusional ranges.
- In supine, the patient can lay under a Marsden ball while receiving a hand and foot massage.
- Ball tapping with palm affects the palmar reflex,
- (Main reflexes involved: FP, MR TLR, Babinski & palmar reflex)

14. RELAXATION/ MASSAGE CHAIR:

- Provide adult patients and parents a space to relax while using a massage chair.
- Families can enjoy their experience while patients participate in therapy.
- Adult patients can relax before their sessions.
- Use prior or following vision therapy.
- Use while patients are dilating

15. TEXTURES & TACTILE TRACING:

- Using textures in therapy utilizes supportive sensory information to make eye hand connections.
- Perform motor equivalents by feeling premade circles on paper. Circles can be made using puff paint, Wikki Stix, string or other textures.
- Perform line tracing by feeling premade circles on paper. Circles can be made using puff paint, Wikki Stix, string or other textures.
- Use Wikki Stix to create a top and bottom line for writing letters.
- The patient uses fingers or toes to trace lines made of string, puffed paint or other texture.
- Apply sand and polyurethane coating to balance boards.
- (When using hands and feet to feel the main reflexes involved would be Palmar & Babinski)

16. BRUSHING:

- The Wilbarger Protocol for Sensory Defensiveness is the most commonly taught protocol for brushing.
- Do not state you are using the Wilbarger Protocol if you are not certified.
- It is recommended that you learn more about brushing from a certified provider.
- The Wilbarger Protocol for Sensory Defensiveness would instruct you to brush entire body.
- Guidelines you should follow: Never brush the areas involved with digestion and always brush with the hair growth.
- The Wilbarger Protocol is not the only useful way to use brushing.
- Other brushing techniques are helpful.
- Individuals who are tactile defensive may initially find brushing painful or agitating. With continued brushing the tactile sense becomes more developed and the individual eventually finds the experience soothing.
- For laterality: Prior to slap tap, brush one limb or one side. It is recommended you brush the non-dominant side and continue to brush only that side until the patient can feel the differences between sides.
- Brushing hands and feet can help to integrate palmar and Babinski reflexes.
- (Main reflexes involved: MR & Tactile reflexes including SG)

17. ALCOHOL SWAB DOTS:

- Rubbing alcohol on the skin leaves a cooling sensation.
- This sensation can bring awareness to the part of the body that has been touched by the alcohol.
- Always ask families first. Children who are seriously gluten intolerant may be affected by alcohol and hand sanitizers because they can be derived from grain.
- Overuse could dry out skin.
 - Letter formation/laterality:
 - The patient lifts the back of their shirt.
 - The therapist dabs a 9-point dot grid using an alcohol swab.
 - The patient has a dry erase dot grid in front of them.
 - The therapist names the dots.
 - Top left dot, top middle dot, top right dot etc. Then the therapist draws a letter on the back.
 - The patient uses the dots to draw the same letter on the white board in front of them.
- (Main reflexes involved: MR & Tactile reflexes including SG)

18. WEIGHTED BLANKETS:

- Weighted items are used on a daily basis in our VT practice.
- Weighted items affect muscle tone and provide proprioceptive input.
- Weighted blankets can calm a busy body.
- They can be made in various shapes and sizes to meet the needs of various patients.
- Directions for “how to make a weighted blanket” can be found online.
- Use with any Vision Therapy exercise seated or laying down.
- Weighted vests can be used for standing procedures.
- Weighted balls can be used to pass from hand to hand, bringing awareness of the upper extremities.
- (Main reflex involved: TL)

19. TACTILE DRAW A PERSON:

- The patient stands in front of a white board with the therapist standing behind.
- The therapist touches the patient as they outline the patient’s head, neck, ears, shoulders, arms and back.
- The patient draws the image felt in front of them on the chalk/white board.
- Include spine in picture for a representation of midline.
- Repeat using yoked prisms. How did the picture change with variations in prism direction?
- (Main reflexes involved: MR, TLR & SG)

SUGGESTIONS FOR INCORPORATING AUDITORY/RHYTHM IN VISION THERAPY

20. METRONOME:

- Using a metronome with vision therapy exercises makes connections between the visual and auditory pathways.
- Accurate perception of space involves perceiving space and time. Our auditory and visual pathways work together to develop space and time perception.
- A metronome provides repetitive exact measures of sound in space and time.
- Using a metronome can help organize the body.
- Using a metronome may be distracting if auditory processing is not well developed.
- As the auditory sense becomes more integrated with the visual sense, a metronome can be used to load a vision therapy activity.

21. OPEN AIR MUSIC:

- Use of music in VT can stimulate the nervous system to calm or increase arousal.
- Use projected lyrics from popular songs using YouTube or Karaoke equipment.
- The patient reads the lyrics projected while singing the song.
- Be cautious not to overstimulate a patient with brain injuries or sensory disorganization.
- (Main reflexes involved: Reflexes related to speech and auditory, SG, & ATNR)

22. CLASSICAL MUSIC:

- Research has demonstrated the benefits of listening to classical music.
- Classical music can help relax a patient or inspire creativity.
- The rich tones and frequency of music is said to stimulate organization of the brain resulting in improved memory, perception, listening, spatial awareness and productivity.
- Using classical music in the background can provide a positive and relaxed vision therapy experience.
- Using headphones while performing VT exercises makes neurological connections between our visual and auditory pathways.
- Be cautious not to overstimulate a patient with brain injuries or sensory disorganization.
- (Main reflexes involved: Visual, auditory, SG & TLR)

23. RHYMES:

- Using rhymes in vision therapy can help with visual and auditory memory, reading fluency, sequencing, math, speech, timing, rhythm and general knowledge pertaining to the rhyme)
- You can incorporate rhymes in many of our exercises: i.e.: Flashlight pointing: The patient reads the rhyme while using laser pointers to touch target pictures related to the rhyme. (This is the house that jack built- targets are pictures of items such as jack's house, malt, mouse, dog etc.)
- Rhyme hart charts: use lines of a rhyme to create near far rhymes.
- (Main reflexes involved: Reflexes related to speech and auditory, SG, & ATNR)

24. CHILDREN'S FOLK SONGS:

- Like rhymes using folk songs in vision therapy can help with visual and auditory memory, reading fluency, sequencing, math, speech, timing, rhythm and general knowledge pertaining to the song.
- (Main reflexes involved: Reflexes related to speech and auditory, SG, & ATNR)

25. AUDITORY PROCESSING PROGRAMS:

- Auditory processing programs are a natural complement to vision therapy since visual and auditory pathways are neurologically connected through the vestibular system.
- There are several researched based programs available.
- Certification for becoming a provider usually requires attending a weekend training and examination.
- Auditory processing headphones can be worn with most vision therapy activities.
- (Main reflexes involved: SG, MR, ATNR & TLR)

26. DICHOTIC WORD STIMULATION (LEFT/RIGHT EARS)

- Words are heard individually by the left and right ears.
- The eyes tend to move toward the ear that the word is spoken to.
- This reflexive response has been helpful when breaking visual suppression and working on increasing BI ranges.
- Not available with all auditory processing systems.
- (Main reflexes involved: SG, MR, ATNR & TLR)

27. AUDITORY CENTRAL PERIPHERAL PROCESSING/ FIGURE GROUND

- Listening to headphones while performing and attending to vision therapy tasks stimulates the development of auditory central peripheral processing/ auditory figure ground skills.
- Some auditory processing programs have exercises that directly work on auditory figure ground.
- Not available with all auditory processing systems.
- (Main reflexes involved: SG, MR, ATNR & TLR)

28. TRAMPOLINE:

- Rebounding creates an awareness of using vision as a primary guiding system for movement, stimulates directional awareness (right, left, forward, backward, diagonals, up and down) and relieves stress – a common contributor to vision dysfunction)
- Bouncing can help relax vergence.
- Recommended book: Attention & Memory Training: Stress-Point Learning on the Trampoline Paperback – July, 2005.
- Read chart and bounce on trampoline.
- (Main reflexes involved: Visual, auditory, SG & TLR)

SUGGESTIONS FOR INCORPORATING REFLEX MOVEMENT PATTERNS IN VISION THERAPY

29. SYMMETRICAL TONIC NECK REFLEX (STNR):

- Reflex movement: when the head is bent forward, the arms tend to flex and the legs extend. When the head is tilted backward the arms extend and the legs flex.
- This reflex primarily affects attention, accommodation, and accuracy of vertical eye movements.
 - The patient goes on all fours in a table top position. The patient slowly moves to sit on their feet while their head lowers and their arms stay straight. Then the patient moves slowly back up and past the starting position to an extended table top position.
 - The patient can read a chart when moving up or perform a vergence task such as Keystone cards.

30. AMPHIBIAN REFLEX (CRAWLING):

- Automatic flexion of the arm, hip and knee on the same side of the body of a raised hip.
- This reflex assists in the development of the symmetrical, reciprocal movements needed for the commando crawl and fluidity of walking, running and skipping.
- It also affects balance.
 - In prone and in supine the patient alternately lifts knee then hip off the floor, learning to isolate hips and allow flexion of the knees.
 - The patient can do this movement to a rhythm.
 - The exercise can progress to the commando crawl.
 - Hula hooping works helps to develop this reflex.

31. OCULO-HEAD RIGHTING REFLEX (OHRR) & LABYRINTHINE HEAD RIGHTING REFLEX (LHRR):

- When the body is displaced from midline, in any direction, the head responds by returning to midline in order to maintain a steady visual fixation on a target.
 - While sitting on a chair or therapy ball with a beanbag on their head, they are tilted forward and sideways.
 - The patient can read a chart while being tilted by the therapist.
 - The patient can practice observing or developing perception of parallax while looking at a vectogram and tilting their body.

32. BABINSKI REFLEX:

- When the lateral portion of the sole of the foot is stimulated, the toes flare.
- This reduces the ability for the toes to grip the floor to assist in balance and support visual fixation.
- An active Babinski reflex interferes with the ability to stand still and do fixation tasks.
 - Foot massages, brushing the feet, and toe gripping games are helpful in integrating this reflex.
 - Pick up a Kleenex with your toes.
 - Toss beanbags to a target with your toes.
 - Paint the feet with a dry clean paint brush (no paint).

33. SPINAL GALANT:

- Touching the back causes the patient to curve their hip outward.
- This reflex affects the person's ability to feel comfortable in their own skin, auditory processing, toilet training, sitting still, tactile integration, and moving eyes in horizontal and vertical paths.
- Any activities that stimulate the skin on the back help to integrate this reflex.
 - Bottom scoots: the patient sits on the floor and rocks from side to side to propel the body forward.
 - Finger walking on the back: The patient reports the left and right side of the back and the middle of the back as the therapist walks their fingers across the patient's back. Start at the shoulders and working across and down the back to just below the waist.
 - Angels in the snow: The patient lays down on their back and moves their arms and legs in an open and closed position.

34. ASYMMETRICAL TONIC NECK REFLEX (ATNR):

- When the head is turned to one side, the arm and leg on the side to which the face is turned extends and the arm and leg on the opposite side flexes.
- This reflex primarily affects moving eyes horizontally across midline.
- Pursuit and saccades are affected by the presence of this reflex.
- Laterality and directionality are affected by the ATNR.
 - Practicing lateral eye movements helps to integrate this reflex.
 - Use Greenwald exercise with a Marsden ball.
 - Have the patient move their head to follow ball.
 - When the ball moves to the right the head also moves right, but the left arm extends to the left side.
 - Dabs: When the right arm extends, move the head towards the bent arm to make the popular “dab” movement.

35. TONIC LABYRINTHINE REFLEX (TLR):

- When the head moves forward in flexion, the arms and legs also move into flexion.
- When the head is moved in extension, the arms and legs also extend.
- This reflex primarily affects muscle tone and proprioception.
 - The use of prisms, lenses and filters automatically affects muscle tone and helps to mature the TLR.
 - Standing on a balance board, or balance mat, have the patient move their head forward and backward as they maintain balance.
 - Repeat with prisms base up and base down.

36. PALMAR REFLEX:

- When the palm is stimulated by touch, the hand and fingers move or close.
- This affects the development of fine motor skills, finger differentiation and eye hand coordination tasks such as tying shoes, zipping zippers, typing and writing.
- This reflex naturally integrates through repetitively opening and closing the hand as well as through the experience of crawling with fingers extended for the average 6 months length of time.
- (babies usually start crawling at 6 months and continue until walking at 12 months)
 - Use army crawl to transition from one therapy area to another.
 - Instruct your patient to repetitively open and close their hand using a mirror box.
 - Instruct your patient to repetitively open and close their hands while using the light therapy unit.

37. MORO REFLEX:

- Involves three distinct components: spreading out the arms (abduction), embracing the arms (adduction) and an intake of breath or a cry.
- This reflex is stimulated by a sudden change in balance/ head movement (vestibular), by a sensation (sound, visual, taste, touch, proprioception or smell, or by a thought (psychological).
- Full integration requires addressing the type of stimulus that is causing the reaction.
- Referring a patient to a specialist with expertise in the psychology/psychiatry area can help a patient overcome a Moro stimulated by thought.
 - Incorporating vestibular experiences such as the walking rail, rebounding, balance boards and supine activities over a therapy ball all address a vestibular Moro.
 - Using auditory processing programs and metronomes can address an auditory Moro.
 - Addressing convergence, eye teaming, eye control, etc. can integrate a visual Moro.

SUGGESTIONS FOR INCORPORATING BREATHING IN VISION THERAPY

38. BREATHING DURING TRADITIONAL VT EXERCISES AND ACTIVITIES:

- Breathing decreases overall stress and allows the patient to develop control over the accommodation/ vergence system.
- Many patients hold their breath throughout their day.
- This can interfere with optimal visual performance.
- There are several types of breathing patterns that can be used during vision therapy sessions.
- Use your favorite breathing exercise with each vision therapy activity.
- Observe if breathing helps improve performance.
- If a patient has challenges multitasking breathing during a vision therapy session, they are likely holding their breath throughout the day.
- This multitasking skill will need to be practiced in therapy.
- When using saccadic fixator, instruct the patient to blow out a candle with each touch.
- (Main reflexes involved: FP)

39. HUM BREATHING:

- While in supine, the patient makes a hum sound which sends a vibration through the entire body.
- Inhaling only through the nose.
- The patient should never open their lips.
- Perform hum breathing when tracking a target from side to side
- Stand and hum while tapping a Marsden ball.

40. HISS BREATHING:

- In supine, the patient makes a hiss sound (like a snake) Inhaling only through the nose.
- The patient should never open their lips.
- How long can the patient hiss? Do they take a deep inhale?
- Perform hiss breathing while in supine and while tracking an object.
- Perform hiss breathing when standing and using the Brock string or other fixation task.

41. SUPERBRAIN YOGA®:

- Instruct the patient to cross their arms while holding their ears, with the thumbs in front of the earlobes.
- Instruct them to place their tongue on the roof of their mouth.
- Have them inhale through their nose and slowly squat down to the ground.
- The patient exhales as they return to standing.
- Repeat this squatting action several times.
- Flash cards in front of patient while they are performing the exercise.
- When they are finished with the number of squats you instruct them to perform, ask them to tell you what they saw.

42. BREATHING WITH TIMERS:

- Using a visual timer may help vision lead the breathing exercise.
- Breathing apps are available: i.e. Prana Breathing app has a visual for breath control
- Work to increase the length of inhale and exhale.
- Use breathing with any VT exercise

43. BREATHING & AWARENESS OF BODY

- While practicing deep breathing in supine, have the patient relax and feel if their body is straight.
- Make corrections in alignment if needed.
- Then ask them to stand and compare the feeling.
- Are they able to stand with equal weight on their feet and symmetry from head to toe?
- Use a mirror or balance board to assist.

SUGGESTIONS FOR INCORPORATING POSTURE IN VISION THERAPY

44. TILTING SEATED GAMES:

- While seated on the floor, tilting the patient's upper body forward, backward and side to side with an object placed on the head works on awareness of the upper body.
- This brings awareness to pelvis alignment.

45. STANDING TILTS:

- With a roll of tape on the patient's head, with their feet and toes making contact with the floor; the patient is tilted forward, backward & to the sides.
- Safety consideration: be sure the therapist can safely handle the weight and size of patient.
- Perform column jumping while being tilted.

46. USING YOKED PRISM:

- The use of yoked prisms affects posture.
- Base down prisms tend to lift the head and chest into an upright position, changing the weight distribution in the lower extremities towards the heels.
- Base up prisms would tend to stimulate the opposite effect.
- Base right prisms tend to change the weight distribution towards the left side.
- Base left prisms tend to have the opposite effect.
- Use yoked prisms on a balance mat to increase awareness.

47. VIRTUAL REALITY:

- The use of VR in VT has many benefits and can stimulate awareness of postural changes while the patient is sitting, standing and/or moving around freely.
- Choose eye tracking games.
- Red/green filters can be applied.
- New VR programs for VT are available for vision therapy practices.

48. USING THERAPEUTIC SEAT CUSHIONS, T- STOOLS AND THERAPY BALLS:

- Using a therapy seat cushion, T-stool, or therapy ball allows the patient to feel the horizontal midline of the body at the hips.
- Use these postural tools while doing seated tasks such as parquetry blocks or matching MFBF tiles.

49. USING MIRRORS AND STICKS:

- Patients are often unaware of postural imbalances.
- When a patient sits or stands in front of a mirror you can ask them to notice any imbalances or asymmetries.
- If they are not able to see their asymmetries, try using a stick held at midline directly behind the spine.
- You can also create a "t" behind them by placing another stick level and behind the shoulders.
- The patient is more likely to notice a tilted head, a dropped shoulder or a shift in weight to one side.

SUGGESTIONS FOR INCORPORATING LANGUAGE IN VISION THERAPY

50. KARAOKE & MICROPHONE:

- Using a microphone with activities such as hart chart or flipper reading can help make vision-speech connections and build confidence.
- Some auditory processing programs include word repetition exercises.

- Have your patient look into the mirror as they repeat words to have vision lead speech production.
- Use a projector to project popular songs with lyrics on the wall/ screen.
- Use with flippers for accommodative training.
- This is a fun way to improve reading fluency.

51. DESCRIPTION GAMES:

- Instruct your patient to look at picture cards or an object and write down as many details about it as they can.

52. RHYMES AND FOLK SONGS:

- Use rhymes and folk songs as charts to build visual speech connections.

SUGGESTIONS FOR INCORPORATING GROSS MOTOR IN VISION THERAPY

53. BILATERAL WALKING:

- Using bilateral walking equipment such as cans or wood planks with strings can build homolateral awareness.
- Homolateral movements are natural in the developmental sequence and precede cross lateral movements.
- It is important to include homolateral movements so they can be compared to cross lateral movements.

54. ZOOM BALL:

- Using a zoom ball builds upper body bilateral coordination, timing, rhythm, team work and encourages convergence and divergence skills.

55. ARMY CRAWL:

- Builds coordination and synergistic movements between the upper and lower body as well as the right and left sides of the body.
- The normal progression is to transition from homolateral crawling to cross lateral crawling.
- Helps to support cross lateral movements.
- Army crawling codes the brain for higher level skills that are on course for development, such as skipping, riding a bike, reading and writing.
- Use army crawl to transition from one place to another during VT.
- Use a laser pointer to stimulate eye hand coordination as the patient looks and reaches for the laser dot with their hand

56. CREEPING:

- The creeping milestone can be reached without experiencing the prior stage of crawling.
- Creeping helps to support cross lateral movements.
- Creeping helps to integrate STNR, TLR and Palmar reflexes.
 - Use creeping to transition from one place to another during VT.
 - Use a metronome to lift and lower opposite arm and leg as the patient creeps forward.

57. STAIR CLIMBING:

- Helps to support alternating stepping
- Use a metronome to step on rhythm
- Use prisms with stand -by support for safety
- Use visual targets to step on and guide foot placement

58. INFINITY WALK:

- As the patient moves in a figure-8 pattern around cones, they read a letter chart.
- Incorporates vestibular development, saccadic eye movements and central/peripheral processing.

59. WALKING RAIL:

- Using the walking rail helps to promote balanced posture at the ankles, hips, and shoulders.
- Use the walking rail while performing column jumping, vectograms or other fixation task.
- Perform Myer's Ring activity while walking on the rail.

SUGGESTIONS FOR INCORPORATING FINE MOTOR IN VISION THERAPY

60. FINGER ISOLATION GAMES

- Use a mirror box with one hand in the box and the other hand in front of the mirror.
- Both hands are doing the same thing.
- Vision drives the neurological connections between the eyes and hands
- Use prisms to load the activity.

61. LACING:

- When fingers are differentiated consider alternative method for lacing shoes
 - https://www.youtube.com/watch?v=ohUhB_h3wI0

62. PIN PUNCHING

- Help the fingers form a tripod by using push pins.
- Tape a simple coloring page to a piece of pressed Styrofoam.
- Instruct the patient to push the pins into the lines of the drawing.
- Make your own red/green line drawings for an anti-suppression activity.

63. RICE SORTING

- Use a patch
- Use tweezers and a lens bank or flippers to sort grains of rice.
- Sort tallest to shortest
- Sort color light to dark
- Sort thickness fat to thin

64. MICRO-BROCK STRING

- Use fishing wire and the smallest jewelry beads available to make Patti's Micro Brock String.
- Patti's Micro Brock String works great to provide the patient with the information necessary to make micro eye movements needed for fusion of the tiny beads.
- Patients with microtropia benefit significantly
- The clear string is fairly unnoticeable which allows a patient to experience "float"

65. BRACELET MAKING

- Children love to make and share bracelets.
- Making bracelets encourage finger movements.
- Bracelet making kits with directions are available at craft stores.
- Use prisms, patches, filters and lenses while making bracelets.
- Helps with amblyopia, strabismus and spatial awareness.

66. FIDGET TOYS:

- Fidget toys are a current trend for the mainstream population.
- You can find a variety of these toys on amazon.
- Some of these toys have spinners, buttons, and gaming knobs.
- Fidget toys help to build finger dexterity and can be calming to those using them.

67. LEGO BUILDING

- Using Lego blocks in therapy makes therapy more inviting for some patients.
- You can use them in place of parquetry blocks.
 - Can they make a direct copy?
 - Can they recreate the pattern if it were turned 90 degrees to the right?
 - Can they remember the pattern if it is covered up?
 - How many pieces can they get correct from memory?
 - Can they rotate the image in their mind and recreate it from memory?
 - Tip: for complicated designs, use a mental picture of their home and label the pieces of their Lego design based on walking through their own home. I.e.: this yellow block represents my front door. The green block to the right represents the shutters on the front of my house, the blue block behind the yellow block represents my family room, etc.
 - Once the patient has associated the Lego design according to the spatial arrangement of their home, the patient can remember complex block designs.
 - After this you can say build you Legos design from the point of entering your back door.

68. RUBIK'S CUBING

- Twisting and turning the cube utilizes hand and finger movements.
- Make picture charts for a near far task.
- The patient looks at the sequence of moves on the distance chart and then looks at their cube to make the move.

- Sequences of moves are memorized.
- The patient must constantly ask “Where is the piece I need?”; “Where does it need to go?”; “What moves will I use to get it there?”
- Sequencing, spatial organization, spatial awareness and visual memory are all improved by working with the cube.

69. MUSICAL INSTRUMENTS

- Incorporating musical instruments can make working with charts and rhythms more enticing.
- Many musical instruments utilize fine motor skills.
 - Use four drum pads to represent arrow directions
 - Place the pads in the same position as the arrows on a keyboard
 - Follow the chart and tap the pad that represents the arrows on the arrow chart
 - Use a metronome
 - Use piano keyboards and create distance chart of colored block sequences.
 - Use colored blocks to represent notes on a keyboard.
 - Put corresponding colored dots on keys.
 - The patient looks at the distance chart and back down to key board to play the note represented on the distance chart.
 - The patient can create their own charts and play the sequence on their keyboards to hear different arrangements of notes.

70. VT SCRAP BOOK

- Making a scrap book page at the end of their Vision Therapy experience can highlight the success achieved through vision training.
- Working with the small decorations, cutting, pasting and designing the page incorporates many fine motor opportunities.
- Use prisms, patches and lenses while creating the page.

71. BLACK LIGHT/ HIGHLIGHTER

- Patients can experience their own hands in a novel way when using a highlighter and black light.
- Place a dot on the pad of a finger.
- Turn out the standard lights.
- Turn on a black light.
- The dot will glow.
- Add dots to the other fingers.
- Play finger games.
- Name the finger being highlighted. “This is your left pinky finger”.

SUGGESTIONS FOR INCORPORATING IMAGINARY PLAY IN VISION THERAPY

72. IMAGINARY PLAY

- Children who are between the developmental ages of 2 and 4 love to pretend.
- Providing the patient with dress up clothes or accessories can entice cooperation with activities.
- Accents or accessories work best.
- Full costumes are often too stimulating and may interfere with your goals.
- For celebrating Dr. Seuss have the patient wear a costume hat while performing a VT exercise.
 - Disney character wands can be used as pointers.
 - Super hero masks can be used with red/green filters.

SUGGESTIONS FOR INCORPORATING PERCEPTUAL SKILLS IN VISION THERAPY

73. VISUALIZATION

- Visualization is one of the most powerful vision skills that we can develop.
- OEP curriculum has effective exercises for learning to visualize.
- Recommended resource: “See It. Say It. Do It! The Parent's & Teacher's Action Guide to Creating Successful Students & Confident Kids” by Dr. Lynn F. Hellerstein
- Visualize motor tasks before attempting them.
 - This step is often omitted by therapists and patients.
 - Taking the time to visualize the task prior to attempting it not only provides opportunities to improve visualization, but also increases successful performance without the embarrassment of failure.
 - Practicing the perfect performance mentally repetitively fires the neurons needed for actual performance.

74. RUBIK'S CUBE

- After the basic sequences are mastered using charts, the patient can practice visualizing each move.
- The patient visualizes where the piece will go, and where the surrounding pieces will be after each move.

75. ESTIMATING DISTANCES

- How far away is a target item?
 - Use a ruler, tape measure, or another item such as paper clips to measure distances.

76. ESTIMATING TIME

- Awareness of time is a common concern for parents / patients.
- Have the patient estimate time by asking them how long they think it will take to perform a specific task.
 - Examples: Use a timer to discover accuracy.
 - How long will it take you to walk to the wall and back to this chair 5 times?
 - How long will it take you to tie your shoes at a natural pace?
 - How long will it take you to solve this parquetry pattern?
 - Stop me when you think 5 minutes are up.
 - Have the patient make a journal using a small spiral or hardback blank book.
 - Blank books with ruled lines are helpful for some patients.
 - Patient writes down dates and list of things to be done the next day.
 - Patient writes down time frames.
 - Wake up at 6:30 am
 - Breakfast at 7:00 am
 - Feed the dog at 7:30 am, etc.
 - Patient checks off all completed tasks each day.
 - On Sundays, the patient writes out important weekly events.
 - Monday: Basketball practice 7-9 pm
 - Wednesday: Music lessons 4-4:30 pm

77. ROTATING SYMBOLS

- Use a dry erase marker, writing surface and clear sheet of plastic.
 - The therapist or patient draws symbols from easy to complex on the clear plastic.
 - Start with 1 symbol, add more to create a sequence.
 - The patient then draws the symbol on dry erase surface.
 - Can the patient rotate it or flip it?
 - What would the symbol look like if it were rotated 90°
 - Can the patient draw it from memory?
 - Can the patient accurately draw a sequence flipped or rotated from memory?
 - How many symbols, in sequence, can be mentally manipulated?

78. CHESS

- Builds visualization skills.
- Helps develop creativity.
- Improves memory.
- Increases problem solving skills.
- Builds eye movements needed for reading.
- Builds planning skills.

79. KHET

- Khet is a board game that uses strategy and lasers.
- Strategy is similar to chess.
- The players must perceive sequence of possible moves and directions of lasers prior to making a move.
- Many board games require the hands to move game pieces.
- Accuracy in placing the pieces requires dexterity of the hands.
 - <http://www.khet.com/>

SUGGESTIONS FOR INCORPORATING SOCIAL SKILLS IN VISION THERAPY

80. “HOW DO YOU SEE IT?” GAMES

- Have your patient explain how they see depth in a target.
 - If another patient (or the therapist can be involved) is available have them look at the same target and report how they see the target.
 - Talk about how there are no wrong answers.
 - People can see things differently.
 - Learning to look at things from different perspectives helps us to learn more about the world we live in.
 - A patient who can see greater amounts of stereo can bring interest to those patients who are gaining stereo skills.
- Have two people look at the same picture and write out as many words that describe that picture as they can think of. (or state a specific and appropriate number of words to write)
 - Use illusion pictures such as the popular old/young lady picture
 - Discuss similarities and differences in the way they looked at the picture.
 - Talk about how perception affects how we think

81. CONGRATULATING OTHERS

- When a patient succeeds in developing a skill, provide the opportunity for the other patients to congratulate the accomplishment.
- This builds self-esteem for all parties involved.
- Those that are doing the congratulating get an experience of appropriately interacting with others.
- The vision therapy experience becomes more positive and rewarding for all.
- Accomplishments encourage other patients to work harder in anticipation of being complimented by others.

82. VIDEO ANALYSIS OF SOCIAL SITUATIONS

- Use YouTube videos of common social experiences.
- Be sure you have watched the video prior to this exercise to screen for appropriateness.
- Have the patient watch the video while being patched.
- Talk about what and how each eye viewed the video.
- Highlight positive social interactions that were observed in the video.

83. CREATING PLAYS – ROLE PLAYING

- Create a play using VT exercises as part of the story line.
- Use skills learned as part of the story line.
- Other patients of complementary age/skill levels can participate.
- This is a fun VT camp activity.

84. GROUP SUMMER CAMPS

- Parents are always looking for summer camp ideas.
- Offering a low cost camp experience can bring awareness to the benefits of vision therapy.
- Consider the following topics for camp-
 - Sports vision
 - Handwriting
 - Exploring science with prisms

SUGGESTIONS FOR INCORPORATING SPORTS IN VISION THERAPY

85. USING PATIENT'S FAVORITE SPORT EQUIPMENT IN VT

- Have the patient bring in a piece of equipment from their favorite sport.
- Use the racket, stick, or ball as part of the exercises.
 - Arrow chart: have them manipulate the equipment according to the directions of the arrow.
 - Have them perform column jumping while manipulating their equipment.
- Use targets that relate to their sport for vision exercises.

86. STROBES:

- Trains the connections between an individual's eyes, brain, and body.
- Using liquid crystal technology, the lenses flicker between clear and opaque, removing visual information and forcing the individual to process more efficiently. Can be used while performing sports training drills and exercises.
- Can be used while reading or to load a VT exercise.
- Improves balance, anticipation, and reaction speed.
- Some strobes have a control App through Google Play and iTunes.

87. USING STRATEGY & OFFICIAL PLAY DIAGRAMS AND CHARTS

- Each sport has terminology and strategy specific to that sport.
- Using the same terminology and incorporating related strategies in your vision therapy session will help you make the vital connections between patient and therapist.
- Strategy diagrams can be used to work on directionality and laterality skills.
- Diagrams can be used as charts for focal points.
 - Make a second exact copy of the diagram and off set it to the side for a distance fusion activity.

- Slightly displace items on the drawing and you can create depth in the target.

SUGGESTIONS FOR INCORPORATING READING IN VISION THERAPY

88. READING GAMES

- Learning stores have a variety of games to teach reading skills.
- Check out the following:
 - DK Games: Silly Sentences
 - Bananagrams
 - Didax Chunks The Incredible Word Building Game
 - Spot It! Basic English

89. READING WITH STYLE:

- Use a tape recorder and record voice while reading.
 - Play back the recording
 - Ask the patient to evaluate their reading.
 - Repeat reading and record the same passage.
 - The patient describes what was better.
 - There are no wrong answers.
 - Let the patient do all of the talking.
 - The therapist's role is to guide self-discovery.
 - Keep repeating until satisfied for that session.
 - Read with style by changing how loud or soft words are read.
 - Read some words slowly, and some quickly.
 - Read with feelings-some happy and some sad.
 - Read with boredom and with excitement.
 - Emphasize the last or first sound of each word.
 - Listen to how all of these different ways sound on the recording.
 - Point out that when we read with style we have time to look ahead and plan how we will sound when we read upcoming words.
 - Use flippers, patches and lenses.
 - Remember to have fun, there are no wrong ways to read.
- Use song charts for reading-available through learning stores.

90. LEARN TO READ GAMES

- Put 3 index cards in front of patient with simple words on the cards that could make a sentence.
 - I.e.: I, read, can
- Turn over the cards so only one word is flipped to read.
- Ask the patient to look at the card.
- Tell the patient what the word is. I.e. this is the word "I"
- Move the cards around, keeping them all flat on the table, and push the card that says "I" forward.

- Ask the patient to find the word “I”.
- Since this is the only word shown, the patient will likely point to it and be correct.
- Congratulate them on reading the word correctly.
- Repeat mixing up the cards several times and asking them to find the word.
- After several correct performances, flip over a second word.
- Tell the patient what the new word is. “can”
- Move the cards around on the table, mixing up the order.
- Push the new word “can” towards the patient.
- Ask them to read the word “can” while you clearly repeat the word.
- Mix the order again.
- Repeat ask them to find “can”
- See if they remember the word “I”
- Use only these 2 words for a few trials until responses are consistently accurate.
- Then flip over the third word, “read”.
- Repeat above process until all words are remembered.
- The patient learns what the word looks like with repeated success.
- The sequence of words can be reordered to form the following sentences.
- I can read. Can I read? Read I can!
- Use these words for other VT games like C/P saccades or Look-touch-hold back.
- Slowly add new words.

91. MICROPHONE READING

- Use a microphone to help a patient feel comfortable with their voice.
- Use a microphone connected to headphones for the patient to hear their own voice without background noise.
- Highlight success by building a stage with a microphone to make the patient feel like a star performer.

SUGGESTIONS FOR INCORPORATING WRITING SKILLS IN VISION THERAPY

92. SPEED THOUGHTS WRITING ACTIVITY

- Instruct the patient to look at a target picture for 15 seconds and then write down as many descriptive words that they can think of on the white board.
- Repeat with new pictures.
- Give a point for each word used.
- Practice to improve score with each new picture.
 - Check out this game: Rory's Story Cubes

93. DRY ERASE PAPER WRITING MAT

- Create a giant sized dry erase piece of ruled paper by drawing lines on a white shower curtain with a blue and red permanent marker.

- Learning stores sell paper with a cloud on the top line, a flower on the bottom green line and a red dotted middle line. You can copy this pattern using the same colored permanent markers on your shower curtain.
- Washable markers can be used on the shower curtain.
- A spray bottle of water can be used with a towel to wipe away writing.

94. HANDWRITING WITHOUT TEARS® WOODEN PIECES

- Wooden pieces can be used as manipulatives for vision therapy.
- Great for making p's b's q's and d's.

95. WRITING CAMP

- Build your VT practice by offering a camp experience that focuses on the vision aspects of handwriting.

96. OEP writing activities

- Refer to the OEP curriculum for excellent exercises to teach pencil grip and finger, hand and wrist movements.

SUGGESTIONS FOR INCORPORATING MATH IN VISION THERAPY

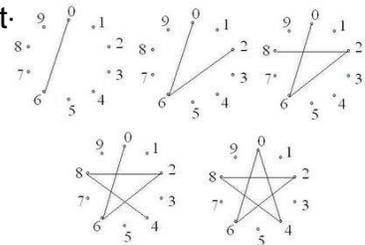
97. MATH SACCADE STICKS

- Use painting sticks to create math saccade sticks
- Write numbers vertically on each stick to count by 2's, 3's, 4's etc.
- Example:
- Spread the sticks apart to increase ROM of eye movements

6	12
18	24
30	36
42	48
54	60
64	70
76	82
88	94
100	106
112	118

98. MATH DOTS

- Hot Dots
 - Educational Insights Hot Dots Math Standards
 - Use for a variety of VT activities to build eye hand coordination skills
- Dice
 - Build math skills using dots on dice to add, multiply, subtract and divide
 - Learning Resources Math Marks The Spot
 - Shut the box math game

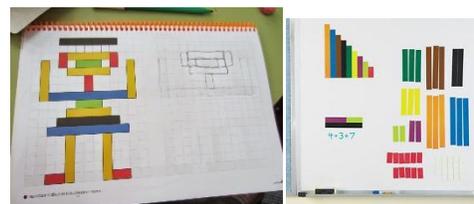


99. MATH STARS

- <https://www.youtube.com/watch?v=N1ALx5q6jO4>
- <https://www.youtube.com/watch?v=mXLzLhfJgxM>

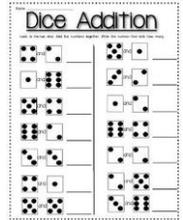
100. CUISENAIRE RODS

- Learn important math concepts as they progress from concrete representation to abstract thinking.
- Cuisenaire Rods provide endless opportunities to introduce, investigate, and reinforce key math topics such as addition, subtraction, geometry, fractions, measurement, multiplication, and division.



101. MATH HART CHARTS

- Use math facts in place of letters for hart charts.
- Put the answer on the charts if you are not trying to load the exercise with a cognitive task.
- Repetitively reading math sentences helps to reinforce memory
- Use subitizing math charts for more fun.
 - Instead of dots, use pictures such as ice cream cones, shamrocks, base balls or other theme.



102. MATH MACHINE LABARGE

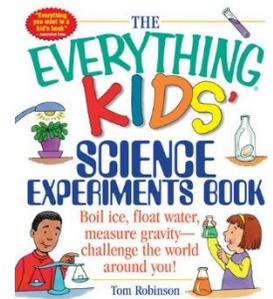
- Use math machine for home practice of Labarge activities.
- Kids & Play Addition Practice Math Machine + - x ÷



***SUGGESTIONS FOR INCORPORATING SCIENCE SKILLS
IN VISION THERAPY***

103. SIMPLE SCIENCE EXPERIMENTS

- There are hundreds of simple science experiences that you can incorporate into VT to bring excitement into your office.
- Find a simple science experiment book for reference and ideas.
- Use patches and lenses to observe the experiments.
- Repeat experiments with different lenses and describe differences.



104. CREATING "MY DISCOVERIES" BOOKS

- Create a VT "My Discoveries" book to write about what they learned during their VT experiences.
- Print out pictures of the patient practicing their exercises.
- Glue the pictures into the book.

105. SCIENCE THEME TARGETS

- Find out what science subject is interesting to your patient.
- If they like space, use planet and star targets
- If they like geology, use gems or pictures of various rocks for targets.
- If they like plants, use pictures of various plants for targets.