Southern California CVI Consortium

CVI Packet

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Cortical Vision Impairment: Overview

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What is cortical vision impairment?

Cortical vision impairment (CVI) is one of the leading causes of vision impairment among children in the United States. CVI is a condition in which the visual pathway and visual processing centers of the brain are damaged and result in reduced vision. Children and adults of all ethnicities may have cortical vision impairment.

Are children with CVI totally blind?

No. Most children with CVI have vision, but the manner that they use their vision is different. Children with CVI generally have reduced central vision, and this can affect their ability to see small details, distant objects. It also affects their ability to make eye contact with people. Children with CVI often turn their eyes such that they use their peripheral or side vision to look at objects. For example, they often turn their head away from the objects they reach for. As a result, it often appears as though they are not looking at the object of interest.

Children with CVI also have other very unique visual behaviors. They frequently are very interested in looking at objects of a particular color, such as red. These children will look at red clothing, red apples, or a red Elmo toy, but they may not look at other colored objects. They often enjoy staring at lights, rotating and moving objects, shiny patterns, or high contrast toys. They may prefer to look at rotating ceiling fans or the credits at the end of a video, but they will not look at the movie.

Is there a cure for CVI?

There is no medication or surgery that will correct the vision impairment of children with CVI. However, a recent paper published in 2012 by Roman, et. al. reported that 95-percent of children with CVI developed higher levels of vision within a period of 3.7 years after receiving a program of visual intervention. In their research study, they decorated the work areas that the children played in and performed specific activities that involved the use of lights, colors, contrast, and other patterns.

What causes CVI?

The most common cause of CVI among newborn infants is the reduced level of oxygen to the brain. Anoxia, hypoxia, respiratory distress, asphyxia, and brain hemorrhage all affect the amount of oxygen that reaches the visual centers of the brain. Other factors that are associated with CVI include intraventricular hemorrhage, periventricular leucomalacia, hydrocephalus, meningitis, seizure disorder and trauma.

Does CVI affect motor and language skills?

Children and adults with CVI may have other concurrent problems in addition to vision impairment. When a person experiences the lack of oxygen, infection, or trauma to the brain, it is possible that numerous functions are affected. Motor skills, speech, language, learning, and other skills may be involved if the brain injury has affected the regions of the brain that control these functions. It is very important that all children with CVI receive complete evaluations to determine if occupational, physical, speech, and other therapies are required.

What can I do to help my child to use his or her vision?

The first thing parents and care givers should do is to have their children evaluated by a team of professionals. Ophthalmologists are required to examine the structures of the eyes and brain to determine if any medical procedures are required. Next, a functional low vision examination by a pediatric low vision doctor is recommended to determine the visual strengths and weaknesses of the children and then to develop a visual intervention treatment program. Third, a teacher for the visually impaired, occupational therapist trained in low vision, or an early intervention specialist will help the parents to implement the treatment program.

Enhancing Your Home for Your Child with CVI

The appearance of your home can affect the manner that your child uses his or her vision. Drs. Hubel and Weisel won a Nobel Prize for their research in which they demonstrated that the environment that one is raised in affects the growth of the brain cells that are responsible for vision. In their research, they found that kittens that were raised without vision later developed vision by being exposed to a stimulating visual environment with colors, contrast, and lights. This important research showed that by enhancing your home with colors, lights, patterns, and toys, you may stimulate the use of your child's vision.

Modifying your home does not require a lot of money. You may already have many items at home you can use to create a visually stimulating environment for your child. Consider going to local stores and asking them for left over paint, carpet, and other materials that you can use. Home improvement stores, fabric stores, paint stores, and schools are often very generous in providing discontinued items, samples, or donated materials in order to create a visually stimulating environment for your child.

How Do I Increase the Brightness of My Home?

Vision requires adequate light to enable your child to see. Many apartments and homes are not well lit or have limited natural light.

- If you have drapes or vertical blinds, open these in order to allow more light into the home.
- Consider painting the walls an off-white color to brighten rooms that are dark. Some paint stores may be willing to donate left over paint.
- If you are not able to paint the walls of your home, create a section of the home that will be brighter. Supermarkets, schools, craft stores, etc. usually have white butcher paper or poster board that can be taped to the walls in the areas that your child plays to brighten the room.
- Paint colorful flowers or other shapes on the wall or on poster board/butcher paper using a primary color like red or blue to provide contrast.
- You may apply large stickers or pictures of Sesame Street, Blues Clues, or other characters on the wall. Tablecloths for birthday parties or colorful wrapping paper can also be used as bright and colorful decorations.
- At night, turn on a lamp that will illuminate the room.

How Do I Increase Colors and Contrast in My Home?

The use of colors and contrast are very important. Many children have a favorite color and it is very important to use that color as you make changes in your home. By using pillows, cups, plates, and toys that are your child's favorite color, your child will be more interested in using his/her vision.

- Use your child's favorite color to accent specific objects and toys in the room. For example, place a red picture of Elmo on the bedroom wall, place red pillows on the bed, and paint the trim on the crib, bed, or door jams in the bedroom red. Often children with CVI are most drawn to red, yellow, and purple but every child is different, so it is important to experiment and determine what color your child is most attracted to.
- When using your child's favorite color, make sure you use opposing colors to provide high contrast. For example, if your child loves yellow, place yellow pictures of Big Bird on a blue background rather than on a white background.
- Paint the light switch covers in your child's room his or her favorite color.
- Consider painting a 6-inch bold line across the walls or various areas of your child's room. This will help your child know his or her room.

- Place colorful pillows on the floor or sofa where your child plays. Use a color that your child prefers to look at.
- Use neon paint and paint geometric shapes on a poster board and place them on the walls where your child plays.
- Consider tying balloons filled with helium so that they float in the room. Children enjoy looking at the balloons, especially when they are the child's favorite color or are shiny.
- Create a mobile that has contrasting colors, such as red and yellow
- Use a blanket or a sheet of a solid color as a background to place your child's toys on. The solid background will make it easier for your child to locate toys. For example, use a black sheet or blanket with a red Elmo on it.
- Use colors and contrast when feeding your child. You can wrap a cloth that is your child's favorite color around his or her bottle. Use cups, utensils, and plates that are your child's favorite color and place foods of a contrasting color on the plate. For example, if your child loves the color red, use a red bowl and place cubes of apples in the dish.
- If you have stairs and steps at your home, place a strip of contrasting colored tape along the edge of the step so your child will see the steps.

How Do I Adapt Lighting Within My Home?

It is very helpful to have the proper lighting for your home. If your home does not have enough lighting, your child will not be able to see faces and toys. However, too much lighting can be very uncomfortable for your child. Ask your eye doctor about the specific type of lighting that would be most beneficial for your child.

- Desk lamps with a "cone shape" lamp shade are very helpful because all the light is directed on the toys your child is looking at. These desk lamps can be moved from the dining area to the play area very easily.
- Position the desk lamps such that your child cannot directly see the light bulb.
- If you are going to purchase a desk lamp, consider an Ott desk lamp because the bulb does not get hot; it produces a lot of light, and is easily moved from room to room. The cost is approximately $40.
- A torchiere floor lamp design is excellent in providing high levels of general lighting in a room. The lamp resembles a torch, where the light is projected upward onto the ceiling to provide illumination.

Toys That Encourage Children with CVI to Use Vision More Effectively

There are many items that you have at your home or may be purchase at low cost to use when playing with your child. Use items that are your child's favorite color and have properties that will increase your child's interest. The following are examples of toys and items that can be used when playing with your child to increase visual response to the environment. We've organized our list according to the unique visual and behavioral characteristics associated with CVI, referenced from Dr. Christine Roman's *CVI Range.*[1]

Caution: Please make certain that there are no small objects or parts that may injure your child or that your child may swallow. Your child's activities should be closely monitored at all times.

Color Preference

- Colorful Slinky
- Crinkly paper
- Sparkly kitten ball
- Pinwheels
- Metallic gift bags
- Bath mitts
- Mylar colored balloons
- Pom-pom
- Colorful measuring cup and measuring spoons
- Colored electrical tape
- Colored plastic utensils (forks, knives, and spoons)
- Colored plastic cups
- Place mats
- Cafeteria tray
- Penlights and flashlights
- Colored tooth brush
- Used golf balls, tennis balls, soccer balls, basket balls
- Velcro tape and elastic
- Poster board of various colors, including neon, black, and white
- Mardi Gras beads
- Gardening items such as colorful pots
- Mobiles for the garden
- Brightly colored cloth, fabric, and materials
- Spray paint
- Colorful bean bags
- Colorful pillows
- Colored Tupperware or plastic containers
- Colored scarf or snow cap
- Colored cellophane to make stained glass window
- Colorful food containers, cups, bowls, plates, and utensils.
- Colorful table cloths for birthday parties
- Wrapping paper

[1] Roman-Lantzy, Christine. Cortical Visual Impairment: An Approach to Assessment and Intervention. 2007. AFB Press, New York: 57-172.

Need for Movement

- Colorful Slinky
- Crinkly paper
- Sparkly kitten ball
- Pinwheels
- Pom-pom
- Large bouncy ball
- Soap bubbles
- Colorful measuring cup and measuring spoons
- Golf balls, tennis balls, soccer balls, basket balls
- Mobiles for the garden
- Mardi Gras beads
- Colorful bean bags

Objects with Reflective Properties

- Wrapping paper
- Colored cellophane to make stained glass window
- Pinwheels
- Metallic gift bags
- Metal bowls
- Baking sheets and muffin tins
- Metal whisk
- Blank CDs
- Mirrors
- Pom-pom

Light Gazing and Non-Purposeful Gaze

- Penlights and flashlights
- Lightbox
- Disco balls
- Decorative string of lights/Christmas lights

Difficulty with Distance Viewing

- Mobiles for the garden
- Soap bubbles
- Penlights and flashlights
- Colored cellophane to make stained glass window
- APH Invisaboard or a black presentation board to eliminate background clutter
- Large sheet in a solid color to use as a back drop to eliminate visual clutter in order to focus on a specific object or person at distance

Additional Toys for Children with CVI

1. **Fabric books**: one image per page, simple graphics, bright colors, crinkle paper
    a. **Giant Soft Book**: cloth book~large (10" square), one image per page, multiple bright colors, textures, peek-a- boo flaps, squeaker and mirror - $22.59
    b. **Find the Ball**: cloth book~medium (7" square), one image per page, bright colors, crinkle paper, attaching loop - $16.99
    c. **Jungle**: cloth book~small (4" square), one image per page, simple graphics, bright colors, crinkle paper, links for attaching - $9.99
2. **See & Say/board book**: one image per page, high contrast, simple graphics - $9.99
3. **Buddy dog**: high contrast, vibration, texture - $32.99
4. **Bizi ball**: one piece pull apart ball, high contrast, crinkly ribs - $25.99
5. **Mini rib-it-ball**: high contrast, easy to grasp, crinkly ribs, vibration - $24.99
6. **Car seat gallery**: simple graphics, high contrast - $16.99
7. **Double feature mirror**: 10" x 14", mirror on one side, high contrast patterns on one side, ribbon ties for attaching - $32.99
8. **Gripper rattle**: bright red and yellow - $10.99
9. **Roly poly chiming clown**: weighted chime toy with red body, high contrast face - $24.49
10. **Ambi lock a block**: shape sorter, high contrast primary colors, raised rims - $19.99
11. **Baby driver**: bright red and yellow steering wheel, suction cup base - $22.99
12. **Rainbow peg play set**: yellow peg board with bright pegs - $19.99
13. **Spinning melody top**: bright color, top lights up and plays melody when spinning - $4.49
14. **Non-stop light show/purple**: spinning table top light show - $15.99
15. **Meteor storm/spectra spinner**: ten sets of lights spin, changing color inside clear globe - $8.49
16. **Light show creator**: multicolored light patterns, soft whirring sound, cooling breeze, handheld or placed on flat surface - $15.99
17. **2-headed light show**: handheld light show, 32 magical lighting effects - $19.99

These toys can be found at:
Playopolis Toys
www.PlayopolisToys.com
Christina Wallerstein, Founder and Chief Play Officer
Voice: 877-579-9300 (no charge)
Local: 626-792-2380 (local)
Fax: 626-585-8675

This list was compiled by the Family Resource Project at the Center for the Partially Sighted along with Early Interventionists and Teachers of the Visually Impaired

Considerations and Recommendations for Play Activities

Simple play with your child is perhaps the best way to encourage your child's development. In addition, play also promotes the development of your child's muscle control, balance, speech, social skills, vision, and the list goes on and on. Interactive activities such as playing peek-a-boo, taking turns picking up Cheerios, reaching for a flashlight, or putting objects in and out of containers all have positive effects on your child's overall development and may encourage visual learning, as well.

In the Phase I, II, and III play activities listed below, you should be mindful of positioning, talking to your child, and allowing your child the time to see. After setting up an activity, try to keep your attention on observing, waiting, and allowing your child the time to respond.

Positioning: Always, remember, that positioning and re-positioning play an important factor in a child's response to their environment. Positioning can impact latency, fatigue, and overall endurance for an activity. If your child is not responding or responding well, look at their positioning and the position of objects and decide if movement is necessary. Sometimes, a slight change in the positioning of a chair or moving an object to the right or left can have a dramatic impact on a child's visual response.

Talk to Your Child: Talk to your child to capture his or her attention but then keep quiet for a period of a minimum of 15-seconds to allow your child to concentrate on looking at your face. Interactive activities stimulate the development of the brain and may help your child learn to maximize vision.

Giving Your Child the Time to See: Present a toy and wait. Do not talk or provide auditory input after asking your child to look. Keep the object in the same visual field long enough for your child to see it. Use a solid contrasting background if that helps him/her find the object.

Phase I Play Activities

During Phase I play, the goal is to assess your home and provide your child with everyday items that are visually interesting to look at. Ask your eye doctor what features are most interesting for your child to see. For example, what color objects and toys are most visually engaging, what distance is best, which field of vision to use, how much time to allow your child to visually attend, should toys be moving or stationary, and what level of lighting should be used.

In order to best understand how your child's visual diagnosis can impact your child's development, it is best to discuss your child's condition with the Pediatric Ophthalmologist or Developmental Optometrist. The following play activities are not meant to be a treatment plan but are simply ways to encourage your child's interest in using his or her residual vision in play.

1. **Enhancing the Environment**: Adapting your home and the areas where your child plays to make it more visually stimulating. For suggestions, please refer to the section on "Enhancing Your Home for Your Child with CVI."
2. **Prepare a Play Area**: Select an area that is free of clutter, noise, and other distractions. Position your child such that your child is comfortable. Your child should have windows or doors at their back (they should not directly face windows or doors). Position a desk lamp behind your child and turn off the over-head lights so that your child will not stare at the ceiling light. Place a black, gray, or contrasting solid color sheet or blanket to place the toys on to make it easier for your child to see.
3. **Favorite Color**: Use your child's favorite color to stimulate looking. For example, if your child loves the color yellow, use yellow rubber duckies or Big Bird toys. If your child prefers the color red, use Elmo and other red toys. Use blankets and pillows that are your child's favorite color and place them on his or her bed.
4. **Proper Distance**: Present toys, your face, and other objects at the distance and location that the doctor recommends. Most children will be able to see objects better when they are within arm's reach.
5. **Shake and Move**: Move the toys and objects occasionally to stimulate interest. Most children will become more interested if you periodically move the toy or object.
6. **Wake Up Time**: When you wake your child up in the morning, position your face at the distance that your child is able to see best. Turn on the room lights or open the drapes. Move your head from side to side as you talk to your child. If your child has a favorite color, wear a snow cap that color or wear a scarf to get your child's attention. Colored head bands and wrist bands are also helpful to wear to get your child's attention. Use a piece of black poster board to put behind you if your child has difficulty looking at your face because of distractions in the background.
7. **Getting Dressed:** When you begin to dress your child, move the clothing and allow your child to follow the clothes with his or her eyes. Try to use clothes that are your child's favorite color and move it from one location to another. Encourage your child to reach and touch the clothing. Shake the clothing and allow your child plenty of time to visually locate the clothing.
8. **Wash Up**: The bathroom is another great place to stimulate vision. Take your child to the bathroom and allow your child to turn on the lights. Use a colored switch plate (you can spray paint it yourself) so your child can see where the light switch is located. Allow your child to turn the lights on and off. Wash your child's face with a face towel that is your child's favorite color. Play peek-a-boo with the wash cloth.
9. **Time to Eat**: During meals, use the same principles to stimulate vision. Wrap a colorful cloth that is your child's favorite color around the bottle and allow your child to follow the bottle before he or she gets to drink from it. Similarly, use cups, plates, and utensils that are your child's favorite color. Use

contrasting colors to make it easier to see food. For example, use a red place mat, a white plate, and then place strawberries on the plate.

10. **Let's Do the Dishes**: Depending on your child's age, you may allow your child to help when doing the dishes. Use colorful dishes and allow your child to wash, rinse and dry the dishes.
11. **Stained Glass Window**: Create a stained glass window by affixing colored cellophane paper on the window. Encourage your child to look at the stained glass/cellophane, crawl towards it, reach for it, etc.
12. **Spinning Drum**: Make a high contrast, spinning drum by using a Quaker Oats container or a 2-liter soda bottle. Wrap a white piece of paper around it and then use colored electrical tape to form bold stripes on the paper. Spin the drum slowly to engage your child's attention and allow your child to follow the drum.
13. **Toy Bar**: Create a toy bar that can be positioned over your child so that your child can look at toys in a comfortable position. Use elastic straps and affix rubber ducks, Slinkys, colorful balls or bells, or other toys on the bar. You can also make a mobile with suspended CDs (CD's are shiny and reflective).
14. **Video Time**: Use visually stimulating videos such as Baby Mozart and Baby Einstein when you are busy performing other activities. Screen Savers on the computer are also visually stimulating.
15. **Pom-Pom Play**: Use shiny pom-poms and shake them to attract your child's attention. Move the pom-poms in different directions and encourage your child to follow it.
16. **Spinning Pinwheels**: Use colorful spinning pinwheels and position the pinwheel at the proper distance. Allow your child to look at the pinwheel. Occasionally, move the pinwheel and encourage your child to follow the pinwheel as you move it.
17. **Ceiling Fans**: Many children enjoy looking at moving objects. You can position your child under a ceiling fan. Tape a strip of colorful reflective material like Mylar on each blade of the fan and allow your child to look at the fan.
18. **Glove and Mitten**: Use colorful gloves that have one side of the glove one color and the other side a different color. Simply move your hand to allow your child to see the change in color of your hand. Put the gloves on your child's hands and encourage visual attention to their hands as well.
19. **Magical Mylar**: Mylar is reflective and bright so it attracts visual attention for a variety of reasons. Use colored Mylar wrapping paper or an old deflated Mylar balloon and cut it in strips. Glue these strips on furniture or other objects near your child or in their play area. Use a fan to blow on the strips, so they move and catch light.
20. **Lighted Pop Beads**: Use a penlight inside a pop bead that is the child's favorite color. As the pop bead becomes a familiar object, you can use the pop bead without the light and add more pop beads or introduce another color.
21. **Familiar is Best**: Place toys and objects that your child is familiar with in the areas that your child plays or spends most of the day. You do NOT need to have a large number of toys. It is better to use the toys that your child is most familiar with.
22. **Light Box Activities**: Your school or early intervention teacher may recommend activities using the Light Box. The Light Box provides more illumination and contrast to encourage your child to look. Items like a yellow slinky or colorful plastic fish in a ziplock bag with water are bright and have movement. When placed on the Light Box, they may attract your child's visual interest.

Phase II Play Activities

During the second stage of play, we recommend activities that will encourage your child to use vision, hearing, touch, taste, and smell to learn about cause and effect. In Phase I, children are building visual behavior; in Phase II, vision in play stimulates motivation and action.

1. **Daily Routines**: Continue to perform the daily routine of activities when you awaken, groom, dress, and feed your child.
2. **Use Multiple Colors**. Present toys that include a combination of two colors with one color being your child's favorite color. Checker board towels and patterns are helpful. Use two colors to mark and paint the door jam or door knob in your child's room or specific play areas.
3. **Textures:** Use pillows and materials of various textures so your child will be able to feel and begin to notice differences in textures.
4. **Crinkly Paper**: Use colored paper that is crinkly. Encourage your child to reach and grab the paper. Children enjoy the sound of this paper. Encourage them to look for the paper and then grab it with their hands.
5. **Hand Exploration:** Babies and children like to watch their own hand movements. Put mittens on your child in their favorite/preferred color. Allow them time to observe their hands in the mittens. To encourage them to look at their hands, play pat-a-cake or games like head, shoulders knees and toes while you guide their hands to touch different body parts. Socks in their preferred color can encourage them to look at their feet.
6. **Bath Mitt Play:** Use bath mitts when giving your child a bath to stimulate vision. Move your hands and encourage your child to reach for your colorful bath mitt.
7. **Colored Soap Foam:** Write on the bathroom wall with colorful soap foam and allow your child to touch the colorful foam with his or her hands.
8. **Toy Bar Play:** Make a toy bar out of PVC and hang soda cans, bottles. You can also use CD's and paper plates decorated with black markers. Affix the items using Velcro tape. Encourage your child to reach and grab the toys or soda bottles and remove it.
9. **Grab the Golf Balls**: Affix one side of a Velcro trip to golf balls or small whiffle balls and the matching strip on a cookie sheet or wooden board. Encourage your child to remove the golf or whiffle balls from the sheet/board and place them in a coffee can or container.
10. **Coffee Can Play:** Ask your child to put objects into coffee cans. Encourage your child to cross the midline of his or her body. For example, place the coffee can on his or her left side and ask them or assist them to use their right hand to cross midline and insert the balls in the can.
11. **Fisher Price Crib Toy Aquarium**: This is a toy that can be attached to the crib to encourage reaching.
12. **Giant Peg Board**: Create an activity board. This is a pegboard with various objects connected with zip ties and shower curtain rings. Your child can reach for the objects with guidance from the board. Because the toys are attached, it is easier to find them and if they lose visual contact or their grasp on the toy, they can still find the object attached to the board.
13. **Cookie Sheet Play.** Use a cookie sheet with Velcro strips. You may place various toys on the cookie sheet by using Velcro. Place the toys on the cookie sheet and encourage your child to reach and grab the toys.
14. **Felt Board**: You can use a piece of black felt and attach it to a poster board or a large piece of cardboard. Cut geometric shapes of your child's favorite color from felt and attach the shapes on the felt board. Encourage your child to pull the shapes off the board and later put them back on the board.
15. **Activities in the Car**: Place a colorful cloth or blanket on the back of the car seat in front of your child so that your child has something interesting to look at. Consider suspending a colorful Slinky or

create a colorful mobile and allow it to hang in front of your child in the car. Do not use toys that have bells attached or that make noise.

16. **Cause and Effect Toys**: Use toys that have cause and effect such that when a button it pressed, an object such as Big Bird or Elmo pops up.
17. **Time to Get Dressed:** When purchasing clothing for your child, purchase clothes that include your child's favorite color but also has another color on it. For example, rather than just purchasing a red t-shirt, buy a t-shirt that has red and yellow stripes.
18. **Feeding Time**: Continue to use colorful utensils, plates, napkins, and cups that include your child's favorite color. However, encourage your child to reach for the cups and food items so that he/she learns that something beneficial comes from reaching and grabbing food.
19. **Bath Time**: Use yellow ducks or other plastic toys that can float and place them in the water with your child. Encourage your child to follow the toys and reach for them.
20. **Music Time**: Spend time playing with musical instruments such as maracas, shakers, drums, bells, play pianos, rhythm sticks, etc. and paint them bright colors or apply colorful tape. Allow your child to experience cause and effect playing the instruments.
21. **Tap the Switch:** Use colorful switches and connect them to a tape recorder or CD player. Teach your child that he or she can turn the music on and off by tapping the switch.
22. **Crawling and Walking Guide**: Paint a bold stripe approximately 4-inches wide in your child's favorite color along the wall to give your child something to follow when he or she walks or crawls.
23. **Little Room**: You can create a small room for your child using cardboard or a small tent. Suspend visually stimulating toys from the ceiling and allow your child to lie under the objects and reach for them. Ask your teacher for children with visual impairments to assist you with this project.
24. **Toy Bin**: Make a box decorated with your child's favorite colors and place his or her favorite toys in the box. This will teach your child what to look for and where to find the toys that he/she wants to play with.
25. **Let's Go for a Walk:** Take your child for a walk and show your child interesting objects and things in the neighborhood. Your child may be interested in looking at the mail box, a rose, fire hydrant, and other objects. Allow your child to touch and smell these objects.
26. **Let's Go Shopping:** Take your child to the grocery store and allow your child to explore fruits, vegetables, and other items in the market.

Phase III Play Activities

During this phase, the goal is to expand your child's ability to use his or her vision in order to solve problems for daily activities. It is also a time to encourage your child to look at new toys, objects, and items at further distances. Continue to use the activities described in Phase I and Phase II when you awaken, dress, groom, and feed your child.

1. **Facial Expressions and Body Language**: Use facial expressions and body language to provide additional cues to your child about what you are trying to communicate.
2. **Looking Further**: Increase the distance from which you bring items to your child. For example, you may bring a container of orange juice from the refrigerator and ask your child if he or she would like it. Try to have him or her make visual contact with it in order to encourage your child to look further.
3. **Back Up**: Move further from your child to teach your child how to keep his or her eyes on you as you move further away. Similarly, move food items, clothing, and toys further back so that your child will learn to focus at further distances.
4. **Your Choice!:** Allow your child to have a say in which clothing he or she wants to wear by allowing your child to select from two different clothing items. Similarly, use two separate drink containers and encourage your child to reach for the container of what he or she wants to drink. Choice making builds autonomy and self-esteem, while also incorporating visual learning.
5. **Crowded Background**: Begin to include other objects in your child's play area so that your child will learn to focus on the object of interest even when there are other distractions. For example, when feeding your child strawberries in a bowl, consider adding bananas as well.
6. **Increasing Complexity:** Present toys and other objects to your child on a patterned background. This will teach your child how to find the object of interest on the cluttered background. For example, present toys on a patterned blanket rather than a white or blank one.
7. **I Spy…:** Use the "I Spy" or similar books and ask your child to find a specific item that is hidden within the other items. You can also perform this by gathering various household items and placing them on a cafeteria tray or large Tupperware lid. Ask your child to find the specific item on the cluttered tray.
8. **Audio Distractions**: Incorporate sounds and other distractions to observe if your child can still keep visual attention on the target when there are sounds or music that may be distracting.
9. **Obstacle Course**: Create a small obstacle course in your home by placing pillows or other obstacles like toys or stuffed animals that your child will have to navigate around. Observe how well your child uses vision to guide his or her body to crawl or walk while navigating around the obstacles.
10. **Slinky Toss**: Toss a colorful Slinky a few inches away from your child and encourage him or her to reach for it.
11. **Ball Play**: Place your child in a sitting position and roll a soccer ball towards your child. Teach your child to push the ball back to you. Later, use smaller balls. This will develop your child's eye hand coordination.
12. **Shape Sorters**: Use wooden puzzle boards or shape sorters that require your child to insert a round circle into the round hole, etc. There are many different Shape Sorter toys available with various shapes.
13. **Superimposing Blocks**: Use various shaped blocks and ask your child to superimpose or stack blocks of the same shape. Parquetry blocks and Tangram blocks are good for this activity. There are also very large blocks made of foam that can be used for this task.
14. **Copy My Design**: Use the Parquetry blocks, Tangrams or other blocks and give your child a matching set of blocks that you have made. You can create a pattern with two or three blocks and ask your child to copy your design.
15. **Pointing Game**: Encourage your child to look at an object or person by pointing to it/them. This will develop a sense of direction, visual attention and distance vision.

16. **Field Trips**: Take your child to busy locations to search for objects, such as the mall, a park, or an educational toy store. Ask your child to find specific items that you see.
17. **Balloon Play**: Play tap or toss with a colorful balloon and teach your child to tap the balloon in the air or to catch the balloon.
18. **Hide and Seek**: Play the game "hide and seek" in the home and encourage your child to use his or her vision to search for you or other toys that you have hidden.
19. **Sequencing Games**: Encourage your child to learn to count by counting coins or poker chips that are aligned on a table.
20. **Giant Pegboard**: Teach your child to insert the pegs into the pegboard from left to right. Later, you can place a sequence of colored pegs in the top row of the pegboard and ask your child to replicate the pattern on the second row.
21. **Stringing Beads**: Use larger beads and show your child how to string beads onto a pipe cleaner. Then, you can create a sequence of beads on a pipe cleaner and ask your child to copy the sequence.
22. **Decorate cookies or cupcakes**: Make a simple pattern like x's and o's, a smiley face, star, etc. with colored icing on cupcakes. Allow your child to replicate the pattern you have made.
23. **Follow the Map**: Use colored sidewalk chalk and draw a line that you and your child can follow to reach the surprise location, where there may be toys or other rewards.
24. **Dominoes**: Use dominos and ask your child to create a long sequence of the dominos by matching the number of dots from one domino to the next.
25. **Connect Four:** Use this commercially available game to encourage your child to use vision and develop eye hand coordination skills.
26. **Visual Memory Games**: Get various household items and place them on a sheet, a cookie sheet, or a tray. Allow your child to see what is on the tray. Ask your child to close his eyes and then remove one of the items and ask your child what has been removed. Take turns to allow your child to remove an item.
27. **Cardboard Box Play**: Kids love to play in large boxes. You can create a tunnel by opening up both ends of the box and decorating the inside surfaces of the box with your child.
28. **Colored Popsicle Sticks:** Use colored popsicle sticks and make a design with two or three sticks.
29. **Copy the Popsicle Stick Pattern**: Use different colored popsicle sticks to build a square, triangle, or capital letters and ask your child to replicate your design. Once your child has mastered this skill, use colored sidewalk chalk and ask your child to draw what you have made with the colored Popsicle Sticks.
30. **Swinging Ball**: Suspend a plastic Whiffle Ball from the ceiling using a hanging plant hook and string. Allow your child to sit or stand approximately 4-feet from the ball and slowly swing the ball. Allow your child to follow the ball and catch the ball with his or her hands.
31. **Mirror Play**: Use a hand mirror and place it in front of your child. Observe your child as he or she looks at his or her reflection. Move the mirror slowly to develop eye movement skills.

iPad Applications for Developing Vision

The Apple iPad is an outstanding device to stimulate vision. There are many applications (apps) that are very affordable and can be used to develop your child's eye-hand coordination, eye movement skills, and understanding of cause and effect. The following is a list of apps recommended for developing your child's vision.

Phase 1

1. **Awesome**: This app involves a black background with multi-colored circles that can be moved when swiped. $0.99
2. **Baby Visual Light**: This app combines a simple picture with music and is displayed in a slide show format. Free
3. **Bubbles**: This app involves using the fingers to draw bubbles and then popping the bubbles by tapping them. $0.99
4. **Fluidity**: This app involves using an interactive fluid dynamics simulation, where fingers can be used to change the fluid display. Free
5. **iLoveFireworks**: With this app, your child can create a colorful fireworks display by tapping on the screen. $0.99
6. **Infant Zoo**: This is a visual stimulation game where a brightly colored screen and simple shapes transform into animal drawings. $2.99
7. **KaleidoBalls**: This app creates a kaleidoscope pattern just by touching the screen. Free
8. **Ooze**: Push and pull on interactive color-shifting goo to form mesmerizing patterns. Free
9. **Sensory Light Box:** This interactive light box has 21 different stimulating designs. $2.99

Phase 2

1. **Baby Finger**: Parents can touch the screen and cause action to begin. $0.99
2. **Fun Stars and Draw with Stars!**: Both apps involve using the fingers to draw streams of stars. In Fun Stars, the stars become fireworks when touched a second time. Free
3. **My Talking Picture Board**: This app allows you to use your own pictures from your photo library to use for visual discrimination. $19.99
4. **Talking Carl and Gugl**: This game involves an interactive green round and a red square characters named Carl and Gugl, who respond to various gestures and voices. $0.99
5. **Tap N See Now**: In this app, animals float on a screen, and with a light tap the animals move towards the viewer. Free.

Phase 3

1. **Go Away Big Green Monster:** This app involves an interactive story with a dark background. It allows the child to piece together parts of the Monster's face on the screen, including the eyes, hair, ears, and nose. $1.99
2. **Peek-A-Boo Barn**: This app has a red barn that moves until touched, causing the barn door to open and an animal to come into view. The animal then makes a sound and a voice says the name of the animal. $1.99

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