# Vision Forward Association

## Birth to 3 Functional Vision Screening Tool

Child's Name: _____ Birth Date: _____

Chronological Age: _____ Adjusted Age: _____ Gender: _____

Parent/Guardian: _____ Phone: _____

Address: _____

Provider Name/Title: _____ Screening Date: _____

**Purpose:** This Birth to 3 Functional Vision Screening Tool is intended to assist a caregiver or provider in determining when it might be appropriate to refer a child (0-3 years old) for vision testing. It is not an assessment nor diagnostic tool for vision issues. It should be administered at intake and again every 6 months to identify possible visual concerns. Steps 1 and 2 can be done virtually and used without Step 3. Step 3 should only be administered with (a) children 12 months and older and (b) by an individual who has attended the Birth to 3 Functional Vision Screening Tool training with Vision Forward Association.

**Note:** Free trainings on this Birth to 3 Functional Vision Screening Tool are offered throughout Milwaukee County and the state of Wisconsin through Vision Forward Association. Please contact Colleen Kickbush, Teacher of the Visually Impaired, at (414) 403-8683 or ckickbush@vision-forward.org for additional information. View and download the screening tool on the Vision Forward Association website at https://vision-forward.org/services/education-training/children-youth/birth-to-3/babies-count/.

## Results Summary

Indicate *Pass, Monitor,* or *Refer* based on the results of each section of the screening tool.

| | |
|---|---|
| Step 1: Family/Birth History and Initial Observations | ☐ Pass ☐ Refer |
| Step 2: Vision Development Checklist | ☐ Pass ☐ Monitor ☐ Refer |
| Step 3: Functional Vision Screening (12 Months+) | ☐ Pass ☐ Refer |
| **Comments** (Reason for Referral or Description of Concerns): | |

**Results/Action:**

- ☐ **Pass:** Having used this Tool, there are no significant indicators for vision concerns at this time. *Rescreen every 6 months.*
- ☐ **Monitor:** There was one (1) 'no' response in Step 2: Vision Development Checklist. *It is recommended that this child be rescreened in 3 months.*
- ☐ **Refer:** Based on the findings of this screening, it is recommended that the child be referred for a medical and functional vision evaluation. *Please refer to this child's primary physician for a referral to pediatric optometry/ophthalmology **AND** refer to Vision Forward Association.*

**Child was referred to:** _____

**Date:** _____ **Next Screening Date:** _____

## Step 1: Family/Birth History and Initial Observations

One or more 'yes' answers in this section are reason for referral. Do not refer upon finding one 'yes' answer in Family/Birth History section alone (except caregiver vision concerns). Child must also have an additional 'yes' answer in another area on the screening tool.

| **Family/Birth History**<br>Read and respond to each question by checking the appropriate box next to *Yes* or *No*. | |
|---|---|
| 1. Do the parents/caregivers have concerns regarding vision? | ☐ Yes ☐ No |
| 2. Does anyone in the family have a severe vision loss or eye disease that was diagnosed before the age of 18? (e.g., albinism, amblyopia, cataracts, strabismus, retinoblastoma) | ☐ Yes ☐ No |
| 3. Did the child's mother have any serious infections or diseases during pregnancy? (e.g., rubella, cytomegalovirus (CMV), toxoplasmosis, syphilis, herpes, etc.) | ☐ Yes ☐ No |
| 4. Was the child born prematurely or weigh fewer than 3 pounds at birth? | ☐ Yes ☐ No |
| 5. Were there any post-natal infections? (e.g., meningitis, encephalitis, hydrocephalus, prolonged fever, convulsions, etc.) | ☐ Yes ☐ No |
| 6. Was there any kind of head trauma at birth or shortly thereafter? | ☐ Yes ☐ No |
| 7. Has any syndrome been identified (e.g. Down Syndrome, CHARGE, Usher)? | ☐ Yes ☐ No |
| 8. Has cerebral palsy been identified? | ☐ Yes ☐ No |
| **Initial Observations: Appearance**<br>Observe how the child's eyes look and mark *Yes* or *No* for each statement. | |
| 1. Eyes are crossed, turn in or out, or move independently of one another…all the time, part of the time, or when the child is tired. | ☐ Yes ☐ No |
| 2. One or both eyelids droop to cover pupils. | ☐ Yes ☐ No |
| 3. Eyes shake or move constantly. | ☐ Yes ☐ No |
| 4. Pupils are noticeably different sizes. | ☐ Yes ☐ No |
| 5. One or both of the child's pupils are unusually shaped. | ☐ Yes ☐ No |
| 6. One or both of the child's pupils look white or cloudy, red, or violet. | ☐ Yes ☐ No |
| 7. Iris is pink or violet. | ☐ Yes ☐ No |
| 8. One or both of the child's eye orbits looks misshaped. | ☐ Yes ☐ No |
| **Initial Observations: Function**<br>Indicate *Yes* or *No* for each statement, based upon observation of the child. | |
| 1. Does not blink to an object coming quickly toward their face. | ☐ Yes ☐ No |
| 2. Demonstrates a preference for one eye by turning/tilting head. | ☐ Yes ☐ No |
| 3. Holds objects unusually close (or moves very close to objects) when looking at them. | ☐ Yes ☐ No |
| 4. Holds objects far away when looking at them. | ☐ Yes ☐ No |
| 5. Frequently trips or crawls/runs into things. | ☐ Yes ☐ No |
| 6. Avoids looking at people or objects. | ☐ Yes ☐ No |
| 7. Squints, cries, or otherwise indicates pain in bright light situations, such as sunlight or moving from inside to outside. | ☐ Yes ☐ No |

## Step 2: Vision Development Checklist

For each statement in the child's adjusted age range, check the box to indicate 'yes' or leave it blank to indicate 'no.' If there are 2 or more 'no' (unchecked) responses in the child's age range, mark 'refer' on the front page under Results Summary. If there is 1 'no' (unchecked) response in the child's adjusted age range, mark 'monitor' on the front page under Results Summary and repeat the screening in 3 months.

| Age | Visual Skills |
|---|---|
| **Birth to 1 Month** | ☐ Stares at lights, windows, and bright walls |
| | ☐ Looks briefly at caregiver's face |
| | ☐ Gazes briefly at objects placed in field of vision (may stop sucking or moving momentarily) |
| | ☐ Pupil gets smaller when light is shone in either eye, both pupils get equally larger when lights are turned down |
| | ☐ Seems to focus best on objects about 8 to 12 inches from face |
| | ☐ Follows/tracks slowly moving object horizontally with eyes (both eyes not always moving together) |
| **1 to 3 Months** | ☐ Makes eye contact with you (without hearing your voice) |
| | ☐ Smiles in response to looking into face of a person who is talking or smiling |
| | ☐ Visually inspects their own hands and nearby surroundings |
| | ☐ Fixates on objects and high contrast patterns within field of vision |
| | ☐ Focuses on objects from 5 inches to as close as 3 inches |
| | ☐ Will turn toward an object brought in from the side |
| **3 to 5 Months** | ☐ Looks at objects/toys in their hands momentarily |
| | ☐ Visually attends to objects at distances from 5 to 20 inches and views objects at 3 feet |
| | ☐ Looks at and reaches for most toys within arm's reach |
| | ☐ Follows or tracks an object vertically or a fast-moving object horizontally |
| | ☐ Looks back and forth between 2 objects/people |
| | ☐ Bats at objects that are suspended above him/her |
| **5 to 7 Months** | ☐ Reacts differently to different people and responds to a variety of facial expressions |
| | ☐ Smiles, pats, or kisses their image in a mirror |
| | ☐ Laughs at peek-a-boo games |
| | ☐ Watches people at least 6 feet away |
| | ☐ Tries to reach out and grasp toys or objects |
| | ☐ Both eyes are straight and always move together (one eye should not be turning in, out, up, or down. Deviations should be followed medically. Refer to doctor.) |

| | |
|---|---|
| **7 to 12 Months** | ☐ Looks for toys that have been dropped |
| | ☐ Interested in pictures or picture books |
| | ☐ Reaches for and tries to pick up a small object like cereal, raisin, or lint |
| | ☐ Moves, by any means, toward an object at least 5 feet away |
| | ☐ Tracks objects with eyes rather than just head |
| | ☐ Fixates on facial expression and imitates it |
| **12 to 18 Months** | ☐ Watches a favorite toy dropped into a container and reaches in to pull out an object |
| | ☐ Reaches into a container and tries to pull out an object |
| | ☐ Makes linear marks on paper |
| | ☐ Looks toward indicated objects when requested |
| | ☐ Looks at picture books and turns pages |
| | ☐ Identifies likenesses and differences |
| **18 Months to 3 Years** | ☐ Names or points to self in a photo |
| | ☐ Imitates simple actions like waving, pointing, and clapping |
| | ☐ Matches pictures to objects and pictures to pictures |
| | ☐ Matches colors and shapes (circle, square, triangle) |
| | ☐ Identifies body parts on dolls or picture |
| | ☐ Differentiates, discriminates, and identifies familiar objects |

## Step 3: Functional Vision Screening

This step should only be conducted with (a) children 12 months and older and (b) by an individual who has attended the Birth to 3 Functional Vision Screening Tool training with Vision Forward Association.
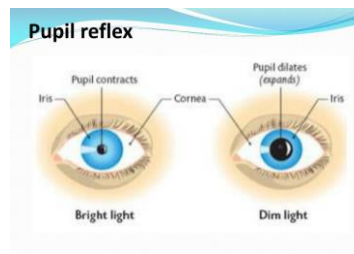
**Pupillary Appearance/Response**
Pupils should be round, black, and equal in size. They should change size, by getting smaller with light and larger in a darkened room. Seizure medications, neurological problems, and other medications can inhibit this response. Both eyes should react equally to changes in light.

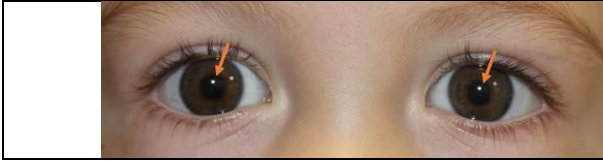| | | | |
|---|---|---|---|
| Right Eye: Pupil Responds to Light | ☐ Absent | ☐ Sluggish | ☐ Quick |
| Right Eye: Pupil is round, black, and equal in size to left eye? | ☐ Yes | ☐ No | |
| Left Eye: Pupil Responds to Light | ☐ Absent | ☐ Sluggish | ☐ Quick |
| Left Eye: Pupil is round, black, and equal in size to right eye? | ☐ Yes | ☐ No | |

**Results/Action:**

☐ **Pass:** Both pupils respond quickly and are round, black, and equal in size.

☐ **Refer:** Absent or sluggish response in either eye OR either pupil is not round, black, or equal in size. Please refer to this child's primary physician for a referral to pediatric optometry/ophthalmology AND refer to Vision Forward Association.


Pupil reflex

## Hirschberg Corneal Light Reflex

Hold a penlight 8 to 10 inches away from the child's face, directly in front of the eyes. Direct the light from the penlight in between the eyebrows. The child needs to fixate either on the penlight or on an object held near the light. Observe the reflection of the penlight in the pupils of both eyes. The reflection should be equally centered and slightly toward the nose. Sensitivity to light, rapid eye movement, and poor fixation observed during the test are also reasons for referral.



| |
|---|
| ☐ Centered in BOTH eyes |
| ☐ Equally centered SLIGHTLY nasal in BOTH eyes |
| ☐ Not centered in one or both eyes |

**Results/Action:**
- ☐ **Pass:** Centered in both eyes or slightly nasal.
- ☐ **Refer:** Not centered in one or both eyes. Please refer to this child's primary physician for a referral to pediatric optometry/ophthalmology AND refer to Vision Forward Association.

## Tracking

Position the object or light about 12 inches from the child's eyes. Move the object to get the child's attention and let them look at it for 2 to 3 seconds. Slowly move the object in an arc to the far left then to the far right for horizontal tracking. Then slowly move the object in an arc up to several inches above the child's head and then down to several inches below their chin.

| Horizontal | ☐ Smooth ☐ Jerky ☐ Absent |
|---|---|
| Vertical | ☐ Smooth ☐ Jerky ☐ Absent |

**Results/Action:**
- ☐ **Pass:** Smooth tracking observed.
- ☐ **Refer:** Tracking is absent or jerky. Please refer to this child's primary physician for a referral to pediatric optometry/ophthalmology AND refer to Vision Forward Association.
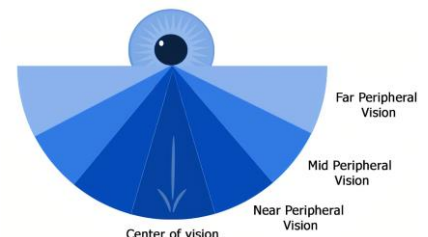
## Visual Field Test

With the child attending to a target such as a toy or the television, attempt to distract their attention by bringing a moving object into their peripheral field. Slowly bring the object from behind the child and toward their central vision. The child should shift their gaze before the object reaches their central vision.

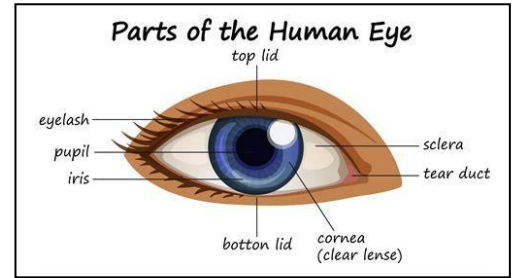| Upper Left | ☐ Yes ☐ No | Upper Right | ☐ Yes ☐ No |
|---|---|---|---|
| Middle Left | ☐ Yes ☐ No | Middle Right | ☐ Yes ☐ No |
| Lower Left | ☐ Yes ☐ No | Lower Right | ☐ Yes ☐ No |

**Results/Action:**
- ☐ **Pass:** Child shifts gaze to at least 4 points.
- ☐ **Refer:** Child does not shift gaze to at least 4 points. Please refer to this child's primary physician for a referral to pediatric optometry/ophthalmology AND refer to Vision Forward Association.

# Definitions and Background Information

**Anatomy of the Eye**
- **Eyelid—**fold of skin that covers and protects the eye.
- **Iris—**colored part of the eye responsible for controlling the size of the pupil and the amount of light reaching the retina at the back of the eye.
- **Orbit—**the cavity or socket of the skull in which the eyeball is situated.
- **Pupil—**black hole located in the center of the iris (colored part) of the eye that allows light to enter toward the retina at the back of the eye.



Parts of the Human Eye

**Evaluations**
- **Medical or Diagnostic Vision Evaluation—**vision evaluation given by an optometrist or ophthalmologist to diagnose and/or treat the visual status of the patient. The evaluation typically includes a complete case history, visual acuity testing, binocular alignment and ocular motility testing, refractive error assessment, and external/dilated examination of the fundus of the eye (retina, etc.).
- **Functional Vision Evaluation—**vision evaluation administered by a Teacher of the Visually Impaired to determine how an individual can use his/her vision and how vision loss may be impacting what the individual can see in the everyday environment. The evaluation typically includes parent report, review of medical/ocular reports, and assessment of the following: pupil responses, blink reflex, eye preference, peripheral fields, visually guided reach, fixation, shift of gaze, muscle balance, tracking, scanning, and discrimination.

**Professionals**
- **Ophthalmologist—**a physician (M.D.) who specializes in the diagnosis and treatment of the eye, performs surgery, and prescribes glasses, medicine, or therapy.
- **Optometrist—**an individual (O.D.) who specializes in the diagnosis and treatment of the eyes and related structures, and prescribes glasses, medicine, prisms, low vision devices, and therapy.
- **Teacher of the Visually Impaired (TVI)—**an individual who has completed a four-year teaching degree in the special education field specific to visual impairments. Some TVIs also have an additional certification in early intervention.

**Tests**
- **Blink Reflex—**spontaneous eyelid blinking which occurs approximately every 5-10 seconds or is induced by sudden sounds or approaching objects.
- **Pupillary Responses/Reflexes—**contractions or dilations of the pupil due to changes in brightness in the environment, or the distance a target is viewed.
- **Field of Vision—**the widest area that can be seen while looking straight ahead.
- **Fixation—**to direct a gaze and hold an object in view.
- **Tracking—**the ability to visually follow moving objects horizontally, vertically, or in an oblique plane.