

## CVI Assessment Protocol

This draft protocol is a first attempt at creating an outline for assessment when children have CVI. This protocol can be used as a framework to guide TVIs as they gather assessment data. A variety of tools (commercial and teacher-made) can be used to gather the necessary data. This protocol was created out of work from **Easterseals of Central Illinois' Alex Program for Cerebral Visual Impairment**. The purpose of this framework is to support TVIs as they assess functional vision and gather learning media data especially regarding a learner's needs for accommodation and specialized instruction.

### Primary Visual Cortex

**Field of Vision** (Loss vs. neglect, hemianopia, lower field loss)

Notes:

**Clarity** (acuity)

Notes:

**Contrast** (contrast sensitivity tests)

Notes:

**Depth Perception** (depth vs crowding, blink, convergence, reach)

Notes:

**Color**

Notes:

**Motion** (Speed, direction, self vs. object, distance)

Notes:

## Ventral Stream

### Object recognition

1. What to do:
  - a. Show object and picture of object
  - b. Show object from various perspectives and/or partially hidden
  - c. Show novel objects that might be recognized (a spoon)
2. What to note:
  - a. Apparent recognition
  - b. Need for time
  - c. Use of tactile support (needed, helpful, increase recognition)

### Motion

1. What to do:
  - a. Move objects in various directions (up/down, left/right, near/far)
  - b. Move objects at various speeds
  - c. Move object at various distances
  - d. Movement of child
2. What to note:
  - a. Needs in order to garner attention
  - b. Blink to recognize object is near or child is moving near an object
  - c. Ability to see object while it is moving/see surrounding while child is moving

### Letter/words/numbers

1. What to do:
  - a. Check out different fonts, sizes, colors and spacing.
  - b. Ask the child to identify familiar letters
  - c. See if pointing out attributes of a letter helps the child to comprehend what letter it is.
  - d. Try providing tactile letters and/or braille
2. What to note:
  - a. Preference
  - b. Recognition
  - c. Benefits of supports such as pointing out attributes and child preference
  - d. Benefits of tactile supports and child preference

### Facial Recognition

1. What to do:
  - a. Familiar and unfamiliar faces including self
  - b. Ask about fear/anxiety
  - c. Real, photo, drawing (NOTE: drawings of faces are recognized using the object center of the brain.)
  - d. Different perspectives of the face
  - e. Different emotional states
2. What to note:
  - a. Recognition and any supports used (ex. body movement, voice)
  - b. Fear/Anxiety
  - c. Distance at recognition
  - d. Benefits of supports such as pointing out attributes

## **Dorsal Stream**

### **Simultanagnosia**

1. What to do:
  - a. Present objects with a variety of others
    - i. Number of objects
    - ii. Similarity in objects
    - iii. Near and distant
2. What to note:
  - a. Impact of number of objects
  - b. Impact of similarity of objects
  - c. Visual search patterns
  - d. Difference in distance
  - e. Field neglect
  - f. Time needed and visual fatigue
  - g. Benefits of supports such as pointing out attributes or highlighting

### **Apraxia of Gaze**

1. What to do:
  - a. Present objects with a variety of others
    - i. Number of objects
    - ii. Similarity in objects
    - iii. Near and distant
2. What to note:
  - a. Visual search patterns
  - b. Difference in distance

### **Optic Ataxia**

1. What to do:
  - a. Observe mobility
  - b. Observe hand grasp
  - c. Ask about CVI Meltdowns and/or Anxiety
2. What to note:
  - a. Whether the child uses tactile cues for mobility or environmental investigation
  - b. The size and shape of the hand when grasping
  - c. Over-reaching / Under-reaching
  - d. Anxiety when objects are moving
  - e. Anxiety in crowds
  - f. Anxiety of change in terrain or at stairs
  - g. Anxiety in new environments

### **Gestalt of the Visual Scene**

1. What to do:
  - a. Observe mobility
  - b. Ask about route planning and memory
  - c. Observe finding object in the scene
  - d. Place objects out of sight and ask the child to recall the object's location several minutes later
2. What to note:
  - a. Whether the child is able to plan routes
  - b. Whether the child is able to navigate familiar and unfamiliar routes independently

- c. Whether the child is able to find favorite objects in a visual scene and at what distance
- d. Note helpful supports such as auditory cues, verbal hints, or visual highlighting.
- e. Whether the child is able to recall the location of an object hidden within the environment and after what length of time