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

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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