| Student Name Alpha | Grade 6            | Age / Gender 11 / Male     |  |
|--------------------|--------------------|----------------------------|--|
| Disability         | Visual Impairment  | Traumatic Brain Injury     |  |
| Examiner           | Candice Joel Fathi | <b>Date</b> April 30, 2017 |  |

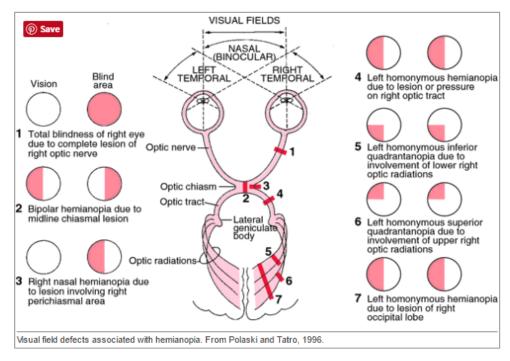
### STUDENT BACKGROUND INFORMATION

Alpha, is an 11 year old, sixth grade male student in the Loudoun County Public School system. Alpha has a genetic condition which causes multiple cavernous malformations in the brain. In 2014, Alpha underwent surgery to remove brain hemorrhages in his brain. A golf ball sized hemorrhage was removed from the left occipital lobe. As a result, Alpha can only see out of the left half of each of his eyes. The medical definition for his visual impairment is, Homonymous Hemianopia.

Homonymous Hemianopia (HH) is hemianopia affecting the right halves or the left halves of the visual fields of both eyes. The student with HH must turn his head from side to side to compensate for the defect. This is not due to any pathology in the eye itself, but to the damage to the optic tract or occipital lobe in the brain.

Hemianopia is defective vision or blindness in half of the visual field, usually applied to bilateral defects caused by a single lesion in the brain. Alpha continues to have multiple lesions in his brain, even post-surgery. Hemianopia is a visual field deficit on one side that often occurs as a result of a stroke, or similar brain injury. Patients with this problem are unable to perceive objects to the side of the visual midline. The visual loss is contralateral, i.e., it is on the side opposite the brain lesion. (See figure 1 below)

Alpha was chosen for the informal reading assessment because of the unique and interesting challenges his visual impairment and brain injuries have on his reading and spelling development.



The examiner was genuinely curious to solve the puzzle for finding the best methods for teaching and improving Alpha's reading and spelling knowledge, considering his visual disability and traumatic brain injuries.

### ORAL LANGUAGE DEVELOPMENT

Alpha does not have any oral development delays. He is from a bilingual environment. The student and parent reported no delays in learning or speaking English. However, because of his visual impairment and visual tracking impairment, Alpha relies heavily on verbal communication for learning, specifically, on his left sided sensory input: sight range and auditory. It's important to note that Alpha has several tumors in his brain that impact his temporal lobe. The temporal lobe is responsible for primary auditory perception, such as hearing, and holds the primary auditory cortex. The primary auditory cortex receives sensory information from the ears and secondary areas process the information into meaningful units such as speech and words. Although Alpha had no oral delays during his development stage, the impact of his brain injuries, and subsequent visual impairments post-surgery, impacts his future education: in speech and reading.

### **ASSESSMENT INFORMATION**

# **Informal Reading Inventory Description (IRI)**

The Jennings Informal Reading Inventory (IRI) assessment is an informal reading inventory used to diagnose reading difficulties, and reading level of the student. The test is comprised of graded word list, graded passages and comprehension questions. The examiner gave Alpha a graded word list of grade level words and stopped when he missed more than 3 errors. The graded levels range from pre-primer level to level 8. More than 3 errors on a level reveals student's frustration reading level. During the reading assessment, the examiner continues until the student reaches the frustration level i.e. less than 90% correct reading. The examiner is looking to find the zone of proximal development. The ZPD is the difference between what a learner can do without help and what he or she can do with help. It is a concept developed by Soviet psychologist, Lev Vygotsky (1896 - 1934). The examiner also listens for five keys of reading: phonemic awareness, phonics, vocabulary, fluency, accuracy, and comprehension. Both passage readings (oral and silent) are timed by the examiner.

# **Spelling Assessment Description**

The Ganske DSA was given to assess the student's current spelling level. The main purpose of the DSA or Developmental Spelling Assessment is to determine a child's stage of development. The screening device consists of 20 words that become progressively more difficult. The words are grouped into sets of five, with each set focusing on a different stage of word knowledge: letter name, within-word, syllable juncture, and derivational constancy (Ganske, 1999). The examiner stops when the child misses more than 3 words in a section. The examiner is looking to

find the instructional spelling level of the student. At the independent reading level, a student scores above 95%, and at the instructional level, he/she scores above 90%. Any scores, below 90% are considered frustration level, and not suitable for instruction. This percentage is based on the statistic that during the average reader's lifetime 85% of their reading will be done at an independent level; the other 15% will be instructed reading.

**Supplemental Assessment Description:** There were no supplemental assessments given to Alpha.

## READING ASSESSMENTS RESULTS

As noted earlier in this report, the Jennings IRI was used to assess Alpha's reading level. Based on the initial IRI reading word list, Alpha was found to be reading at the 6<sup>th</sup> grade level. Alpha read 2 passages: the first one out loud, and the second one silently. The examiner followed along with Alpha's passage reading and identified the number of errors he made. The following table shows the standards of learning for a 6<sup>th</sup> grade reader from the Virginia Department of Education website:

- The student will read and learn the meanings of unfamiliar words and phrases within authentic texts.
- The student will read and demonstrate comprehension of a variety of nonfiction texts.
- The student will read and demonstrate comprehension of a variety of fictional texts, narrative nonfiction, and poetry.

These are Alpha's reading assessment results.

|               | Independent                                       | Instructional                       | Frustration                 |
|---------------|---|-------------------------------------|-----------------------------|
| Word List     | 5 <sup>th</sup> grade                             | 6 <sup>th</sup> grade level         | 7 <sup>th</sup> grade level |
| Decoding      | 5 <sup>th</sup> grade 6 <sup>th</sup> grade level |                                     |                             |
| Comprehension | 6 <sup>th</sup> grade oral & silent               | 6 <sup>th</sup> grade oral & silent |                             |
| Rate Fluency  | Faster silently vs. orally                        |                                     |                             |

Results show that Alpha strength is in silent reading. Alpha's reading comprehension and fluency speed rate is faster on silent passages verses passages read aloud. For both the oral and the silent passages Alpha scored 100% correct on the inferred and direct comprehension questions. Therefore, Alpha is reading at his current grade level.

#### **Decoding**

Decoding is the ability to apply knowledge of letter-sound relationships, including knowledge of letter patterns, correctly to pronounce written words. Strong decoding gives students the ability to see a word for the first time and figure how to correctly pronounce it. Given, Alpha's loss of visual perception (Hemianopia- right side range blindness) and impairments to his temporal lobe (speech and auditory input), decoding whole words was difficult for him. See figure 2 below.





View of Paris for someone with Homonymous Hemianopsia





View of Paris for someone with normal vision.

Google Images

Words on a paper for Alpha are only seen as half of the picture. Decoding, the ability to "see" words for the first time and decode that whole word based off prior knowledge of letters sounds, becomes challenging for student like Alpha with homonymous hemianopia (right sided range); when only the first left of the words are actually "seen".

#### **Phonemic Awareness**

Phonemic Awareness is when students are able to listen and hear, distinguish, and manipulate the smallest phoneme form of words i.e., a student can break down word "cat" into 3 distinct phonemes /k/ /a/ /t/. No supplemental word lists were given to Alpha to test for his phonemic awareness.

### **Fluency**

Alpha was able to read silently much faster than he read aloud. He also noted during the assessment that it was easier for him to read and decode the words in his mind than to have to say out loud the words while he read. The examiner noted that maybe this could be a consequence of the brain trauma and surgical removal of large hemorrhage, and missing brain tissue in the left occipital lobe and the tumors that exist on the temporal lobe that impact speech and auditory input.

# Comprehension

According Jen Chall's model of reading development, Alpha's current reading stage is at the Third stage of reading. In Chall's third stage of reading, students learn new knowledge, information and experiences from reading fiction, textbooks, and magazines. Students in the late stages of the third stage, begin to debate differing viewpoints and can analyze and criticize what they read effectively. When Alpha was asked to retell the passages he read silently, he was able to infer various viewpoints about the given characters and motives. During the assessment, Alpha displayed comprehension of fictional and non-fictional texts, which according to the Virginia Department of Education, meets the 6<sup>th</sup> grade standards of learning for reading.

### Vocabulary

Alpha understood the meanings of all of words on the IRI list for 6<sup>th</sup> grade level. No other supplemental vocabulary list were given.

# WRITTEN LANGUAGE ASSESMENT RESULTS

## **Spelling Results**

As noted earlier, the Ganske DSA was given to assess Alpha's current spelling level. On the letter name section, he did not miss any words. On the within words section, he missed 2 words. In the syllable juncture section he missed all of the words of the section. The initial screening showed that Alpha should begin testing on the within words section since he missed 2 out of 5 words. The examiner did not test at the syllable juncture section words, because that would have been at the frustration level. The word list spelling words were analyzed using the following orthographic rules:

- F = Long Vowels (VcVe)
- G = Controlled Vowels (CV)
- H = Other Common Long Vowels (OCLV)
- I = Complex Constraints (CC)
- J = Abstract Vowels (AV)

## The following table show Alpha's results on the Within Words section:

| Orthographic             | Form A # of | Form B # of | Alpha written      |
|--------------------------|-------------|-------------|--------------------|
| Feature                  | errors      | errors      | errors             |
| VcVe                     | none        | -2          | pien, slid         |
| <b>Controlled Vowels</b> | none        | none        |                    |
| OCLV                     | -1          | none        | steap              |
| Complex                  | -2          | -1          | quiet, brige, rige |
| Constraints              |             |             |                    |
| <b>Abstract Vowels</b>   | none        | -1          | mond               |

### ASSESSMENT SUMMARY

Based on the Virginia Department of Education reading guidelines, during the assessment, Alpha displays comprehension of fictional and non-fictional texts, which meets the  $6^{th}$  grade standards of learning for reading. In comparison to his current  $6^{th}$  grade level, Alpha's verbal communication skills and reading comprehension are above his grade level average.

Although he did not know the 7<sup>th</sup> grade level word lists, he fearlessly and confidently tried to attempt the higher grade level word lists. Alpha was willing to push all the way through all 25 words in the 7<sup>th</sup> grade level. Alpha had a calm and encouraging demeanor during each test. He was a gracious and flexible when the examiner needed to re-assess a certain feature for more data. His demeanor was happy and compliant throughout the assessment process.

Alpha completed the assessment at the within word section of the Ganske DSA. The long vowel markings is at the heart of the within word stage. More strategy instruction is needed for Alpha to master the long vowels feature. The examiner noted that the letters at the end of the words were more likely to be spelled incorrectly. Also, the middle or the word patterns, i.e.: missing "ou" or "dg" in words such as mound, or bridge, and ridge. (See figure 1 and figure 2.) During the DSA spelling assessment, Alpha displayed mastery of the orthographic feature of the controlled vowels. (See spelling table results)

Alpha's limited sight provides his educators with new opportunities to research and discover innovative reading strategies and new instruction methods.

### **RECOMMENDATIONS**

### Instruction

Alpha has been identified as a student eligible for specialized instruction under the IDEA definition of visual impairment including blindness, and is receiving instruction and accommodations with an IEP in his LCPS middle school. The following are the current accommodations listed on his IEP:

- Extended time (up to 50%) on assessments
- Preferred seating (to the right side of the classroom)
- Organizational Support
- End Locker
- Breaks to rest eyes when experiencing headaches or vision blurry

As noted earlier in this report, Alpha can only see out of the left half of each of his eyes. The medical definition for his visual impairment is Homonymous Hemianopia. Homonymous Hemianopia (HH) is hemianopia affecting the right halves or the left halves of the visual fields of both eyes. A student with HH, must turn his head from side to side to compensate for the defect. This is due not to any pathology in the eye itself; but to the damage to the optic tract or occipital lobe in the brain.

After informally assessing Alpha's reading and spelling level and carefully researching his visual impairment and the impact of his brain injuries, the examiner highly recommends the following recommendations be given to Alpha's instructors:

- All of Alpha's instruction should be on the LEFT side of his sight range.
- Preferred seating should be on the LEFT side of the promethean board or wherever instruction is being given. Alpha cannot see outside the right half 56% of both of his eyes. Right sided seating renders him effectively 100% blind. (See figure 2.)
- Giving him a "visually accessible" locker, maybe one at the end of a row on the LEFT
- Considering Alpha's HH brain injury, and his limited visual perception, emphasis should be given to Auditory teaching and Auditory learning. Alpha would benefit from a SIOP taught classroom.

- Adapting a SIOP teaching method: The Sheltered Instruction Observation Protocol (SIOP)
  Model is a research-based and validated instructional model that has proven effective in
  addressing the academic needs of English learners. The SIOP method features focus on:
  scaffolding by modeling, meaningful hands on application, integration of processes by
  speaking and listening, and guided practice.
- Tests be given, on using an iPad or electronic device, in large print, so that Alpha can manipulate the screen and zoom lens for his visual impairment.

These recommendations / suggestions for Alpha's current and future instructors were developed after spending a few hours "seeing the world and classroom through Alpha's eyes".

The examiner, wore glasses that rendered herself 56% right side range impaired on both eyes. (Similar to figure 2.) Reading, writing and typing on a keyboard, were extremely difficult, during this exercise. Similar to statements in the medical background section, the examiner needed to move head back and forth to scan the keyboard and reading materials, because her right sided range of sight was 'impaired.' Considering the lessons learned from this exercise, the examiner would encourage Alpha's mentors and instructors to look at the world from his perspective and consider the accommodations that would best serve themselves.

#### **Recommendations for the Parents**

Alpha has many strengths. He is communicative beyond his age level, and according to VDOE, his reading and comprehension is on mark with his current grade level. Alpha displays grade level metacognition. As noted earlier, Alpha is fearless and willing to challenge his knowledge and learn. After assessing Alpha's strengths and instructional levels, the examiner recommends following for the parents:

- Continued reading and modeling reading for Alpha at home for fluency and for building his vocabulary knowledge.
- Building advocacy and awareness for Alpha's condition, and brain injuries with his educators and community circle.
- Partnering throughout the school year with Alpha's current and future instructors on appropriate accommodations to best serve him and support his academic success.
- Online learning large print and manipulative screens are helpful for Alpha's impairment
- Prism glasses to possibly expand Alpha's range of visibility: http://www.masseyeandear.org/news/press-releases/2013/11/2013-prism-glasses
- The Prism glasses were invented for patients who suffer brain traumatic induced visual blindness, i.e. Hemianopia, and expand the range of visual area by 30-40%.
- Accessing grade level within word online games: http://educationextras.com/WithinWordPatternSorts.html

• The online within word games is a great interactive online tool for Alpha. He can use a large screen device to learn the within word pattern features he is weak in, i.e.: the long vowels using silent e and end of the words (VcVe) feature.

Alpha's success in reading and spelling will be a result of the forged unity and persistent collaboration between his family, the IEP team, and his educators. As we all know, the ancient proverb is too true: "It takes a village to train a child."



Tuesday, May 2, 2017