



# NEILSON

## EYECARE

### **Optometry and Learning – Behavioural Optometry**

90% of our information comes to us through our eyes. As such, visual problems have great potential to hamper a child's ability to learn. As parents and teachers, our observations of the child during schoolwork are essential guides to understanding and helping with difficulties.

### **Refractive and Development Problems**

Refractive and development problems relate to clarity of vision and poor development. These account for a small percentage of vision problems for primary school age children, however they do need to be addressed as early as possible because they can have long term implications.

### **Visual Fatigue – Staying Power**

Visual fatigue is the greatest threat to effective school performance. Being able to maintain the visual effort of school work for some children is very difficult. Teachers and parent's observations are essential in detecting this. Noting that a child 'runs out of steam' or is a better reader in the morning than the afternoon, is an important clue. If a child cannot apply themselves to their work, they will not make progress.

Children demonstrate fatigue in a number of different ways:

- Giving up, avoiding or fighting about doing homework
- Rushing tasks, getting their tasks done before they get tired, but then not doing them well
- Being a better reader in the morning than the afternoon
- Declining performance, making more mistakes, needing to use their finger to keep place
- Getting headaches and sore eyes

These symptoms will occur on weekdays, usually in the afternoon and not on weekends or school holidays. The pattern of the symptoms will give you the clue.

## **Tracking**

An essential skill for reading, tracking is often delayed in a child suffering visual fatigue. Tracking is the skill of following words or numbers across or down a page without the need to use fingers to keep the place. This is extremely important for effective reading.

After looking at the dynamics of vision, we need to look at the educational performance of the child and identify what areas are not performing.

## **Visual Information Processing Skills**

Visual information processing is how we process the information we receive through our eyes. These skills can be broken down into a number of specific areas:

- Visual Spatial Skills – the ability to understand and use direction, our language relies on being direction specific i.e. we read left to right.
- Visual Motor Integration – visual control over the pencil, the ability to write or draw accurately, eg. Hand writing skills.
- Visual Memory – the ability to recall what we have seen, sight words.
- Visual Sequential Memory – the memory of groups/sequences of letters, ie words as a group of letters.
- Auditory Analysis Skills – the ability to identify the parts that make up what we hear, breaking words down to syllables orally.

We test these skills with a battery of tests and then compare the results to the normal age standard to determine if there are any areas that are poorly developed. We can then relate these poorly developed skills to what is not working in schooling and analyse them to formulate a plan to improve the areas of weakness using vision therapy. Vision therapy involves exercises and games which work on skill development. We are looking at computer based training systems to help with the time poor family. We are also looking at new research in helping with dyslexia, including the use of yellow and blue filters and the role of fish oil supplements.

I have included a questionnaire used to help with observations of a child's performance. Please feel free to copy and make use of it.

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