

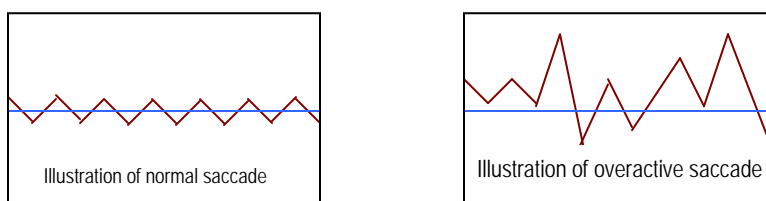
STRUGGLING READERS AND INVOLUNTARY EYE MOVEMENT

SITUATION

Teachers frequently encounter readers that skip words, skip lines or, in more severe cases, say things like “the words are moving on the page” (this is known as “pattern glare”). These students are struggling to control their ‘fields of vision’. Such situations are typically not rooted in intellectual capability; rather, they can be a physical issue.

BACKGROUND

All humans have a normal function called a *saccade* (suh-**kahd**), which is involuntary eye movement that is part of the brain’s ‘locator’ mechanism. Readers who struggle with moving their eyes smoothly from point to point are, in many cases, experiencing what might be termed ‘*overactive*’ saccades. In these cases, erratic, large amplitude eye movements instead of controlled, small amplitude movements occur. This causes readers’ eyes to jump around the page, causing word- and line-skipping and pattern glare (words appear to move on the page).



Control of field of vision: **Normal saccades** *versus* **Overactive saccades**

Stated in basic terms, the brain takes in visual stimuli through the visual processing system and simultaneously attempts to organize the incoming information (i.e., pattern recognition). This process requires smooth eye control (control of the field of vision) to produce a flow of visual stimuli (sequential text) to enable the brain to identify visual patterns. If patterns are not formed or are disrupted due to overactive saccades, then the brain has difficulty interpreting and organizing input into usable information and subsequently into learning. Poor fluency, in this case impacted by overactive saccades, typically translates into poor comprehension.

When readers are provided with a method to better control their fields of vision, their brains and muscles learn the smoother, more tightly modulated left-to-right, top-to-bottom eye movements that are required for improved fluency and comprehension.

SOLUTION

SEE-N-READ[®] Reading Tools (patent pending) are research-based and classroom tested. SEE-N-READ’s clear reading window (ReadBar™) helps the reader’s eyes to focus on the appropriate line of text while the surrounding transparent shaded area suppresses distractions on the page without hiding the context. The shaded area is transparent for two reasons:

- 1.) the shaded area after the ReadBar™ allows readers to use peripheral vision (another part of the brain’s ‘locator’ mechanism) to see the next line coming and smoothly transition from line to line without stopping [preserving patterns and meaning] and
- 2.) The shaded area above the ReadBar™ enables users to re-read text while keeping their place on the page (attempting to re-read frequently causes struggling readers to lose their place) in addition to controlling upward saccades.

For more details and research supporting SEE-N-READ[®] Reading Tools, please go to www.see-n-read.com