**Concussion Baseline Screening**

**Importance of baseline screening**

* + Having access to pre-injury test results to compare with an athlete’s post-injury scores provides clinicians with a set of objective data that can be utilized to make better informed, and therefore safer, return-to-play decisions.
	+ Risk of second impact syndrome or long term impairments if return to play too early

**We chose these 4 tests due to their high validity in identifying patients who have sustained a concussion and their high re-test reliability.**

**Vestibular Ocular Motor Screen (VOMS)**

* This test is used to screen for vestibular impairments after a concussion. Vestibular impairments are a subtype of concussion. The VOMs test measures related aspects of vestibular function that are not measured through the King-Devick or King-Devick Balance. Deficits in vestibular function leads to concussion symptoms, such as dizziness, headache, and balance impairments. The VOMS looks at the quality of specific eye movements and needs to be performed by a medical provider (i.e., physical therapist, nurse, doctor).

**Cognitive Testing**

* Tests chosen are sensitive to changes seen after a concussion AND reflect functional skills in the classroom. Tests include 2-subtests from the Woodcock-Johnson IV Tests of Cognitive Abilities:
	+ Letter-Pattern Matching: This test is a strong reflection of reading and perceptual speed
	+ Number Reversal: This is a test of short-term working memory significantly related to all academic areas and critical for new learning

**King-Devick** (sideline concussion test)

* This test uses the close relationship between eye movement and brain function. It can be performed on children as young as 5 years of age. It can be performed anywhere and in under 2 minutes; and it can be performed at sideline and determine if they had a concussion even if symptoms are not immediately present.

**King-Devick Balance** (can also be done at sideline)

* K-D Balance assesses three key balance stance metrics: double stance, right tandem stance and left tandem stance.
* Other methods currently used to assess balance can be subjective and often include a single-leg stance.  Research has shown the single-leg stance to be highly variable even in healthy patients, resulting in unreliable and time-consuming evaluations.
* K-D Balance does not require, nor does it allow for measurement of single-leg stances saving clinical time and reducing the number of false positives by focusing on the three balance stances of highest value to health care professionals.