

Collins-Maxwell Community School District Concussion Protocol

A concussion is defined as, “a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells” (CDC, 2019). Quick identification and the proper response to concussion help to promote recovery and reduce the risk of further injury, or even death. Sometimes small injuries are overlooked as a cause of concussion. The student may experience a loss of consciousness, however, most concussions occur without a loss of consciousness. A concussion can impair not only the physical abilities of a student, but it can also affect how that student thinks, acts, feels, and learns.

The Collins-Maxwell Community School District strives to maintain a safe and healthy environment for its students, both athletes and non-athletes. As part of this goal, it is the policy of the district to develop a policy and protocol for prevention, education, and management of head injuries/concussions.

Signs & Symptoms

Signs and symptoms of concussion can occur immediately after injury, or may not become apparent until days later. The following table discusses different symptoms students may present have following a head injury.

Table 1: Concussion signs and symptoms

Physical		Cognitive	
Headache/pressure Blurred vision Dizziness Ringing in ears Vacant stare/glassy eyed Disorientation	Nausea Vomiting Numbness/tingling Sensitivity to light Sensitivity to noise Neck pain	Feel in a “fog” Difficulty remembering Difficulty concentrating Difficulty organizing	Easily confused Slowed speech Feel slow Easily distracted
Emotional		Sleep/Energy	
Inappropriate emotions Personality change Nervousness/Anxiety Feeling more “emotional” Easily annoyed	Irritability Sadness Lack of motivation Argumentative	Fatigue Excess sleep Trouble falling asleep	Drowsiness Decreased sleep

If a Collins-Maxwell Community School District employee, coach, or official observes any signs, symptoms, or behaviors consistent with a concussion or brain injury in a school activity, the student shall be **immediately removed from participation**. This is required by Iowa code 280.13C(2). A student who has been removed from participation shall not return to such participation until the student has been evaluated by a licensed health care provider trained in the evaluation and management of concussions. A student must then receive a written clearance to return to participation from the same health care provider who evaluated and/or diagnosed or managed the original injury.

A school activity includes any physical education or weightlifting course, recess, extracurricular activity or practice, including sports, dance, or cheerleading.

A licensed health care provider includes: a medical doctor or doctor of osteopathic medicine, , physician's assistant, advanced registered nurse practitioner, chiropractor, physical therapist, nurse, or licensed athletic trainer.

Concussion Management

Head Injury Protocol During School Hours

1. A student will be sent to the school nurse for assessment after any head injury.
2. The staff member that first encounters the student with a suspected head injury should initiate/complete the Collins-Maxwell CSD incident report form.
3. The school nurse will observe the student for signs and symptoms of a concussion, and document these in the electronic record.
4. The student should be observed during the initial few hours after the injury to report any increase in symptoms/deterioration of student's status.
5. Classroom teacher will be notified and will consult with the school nurse if any signs and symptoms of concern are identified in class.
6. Student's parent or guardian will be notified of the injury, and of observations by the school nurse, or other designee, during the school day.
7. If signs or symptoms of concussion are not present, the student may remain in school, but **should not participate in any sports or recreational activities on the day of injury**.
8. Student will return to school nurse immediately if symptoms of a concussion manifest at any time after the injury.

Head Injury Protocol Outside of School Hours

1. The student will be removed from activity immediately.
2. Assess and monitor for signs and symptoms of concussion.
3. Coach or administrator must notify a parent/guardian of the injury.
4. Coach or administrator must complete a Collins-Maxwell CSD incident report.
5. Regardless of whether a concussion has been diagnosed, the student should not return to activity that day.
6. During the school year, the coach or administrator will notify school nurse and athletic director if any student experiences a head injury during practice or competition.
7. During the school year, the coach or administrator that first encounters the student with a suspected head injury will fill out a Collins-Maxwell CSD incident report.
8. During the summer, the coach or administrator will notify the athletic director and central office if a student experiences a head injury during practice or competition.
9. During the summer, the coach or administrator that first encounters the student with a suspected head injury should fill out an incident report.

If a Concussion Occurs Off of School Grounds

1. Parent/guardian should take student to licensed medical professional for examination to diagnose concussion.
2. Parent/guardian should contact school regarding injury.
3. Student should not participate in activities on the same day as injury.
4. Student's Return to Learn concussion management should be sent to the school.

Management of Diagnosed Concussion Symptoms

The Concussion Management Team will identify needs, and plan for ways, to promote the success of a student with brain injury and/or concussion. A student support team will consist of participants identified in Table 2. These team members will work closely with the student to manage their needs at home, school, and during extra-curricular activities. The school nurse will

monitor the student support team throughout the progression of concussion management interventions.

Table 2: Multi disciplinary concussion team

Team & Members	Roles & Responsibilities
<p><u>Family Team:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> The student <input type="checkbox"/> The parents/guardians <input type="checkbox"/> Other family members 	<ul style="list-style-type: none"> <input type="checkbox"/> Remove student from physical activity immediately, including play at home/community, recreational and/or club sports <input type="checkbox"/> Communicate with school and medical teams. <input type="checkbox"/> Reduce home/social stimulation including “screen time” such as texting, social media, video games, and TV. This also includes reducing or elimination time spent in loud environments, such as sporting events, parties, concerts, and dances. <input type="checkbox"/> Reduce or restrict driving or operating machinery. <input type="checkbox"/> Encourage rest. <input type="checkbox"/> Monitor and document emotional, cognitive, physical, and sleep/energy changes and symptoms by using a symptoms checklist as needed. <input type="checkbox"/> Provide information regarding student’s pre-concussion cognitive functioning to the Medical and School teams. <input type="checkbox"/> As symptoms lessen, gradually remove home and activity restrictions, as tolerated.
<p><u>Medical Team:</u> Student-specific licensed healthcare provider, which may include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Physician <input type="checkbox"/> Physician’s Assistant <input type="checkbox"/> Advanced Registered Nurse Practitioner <input type="checkbox"/> Registered Nurse <input type="checkbox"/> Chiropractor <input type="checkbox"/> Physical Therapist <input type="checkbox"/> Athletic Trainer <input type="checkbox"/> Neuropsychologist 	<ul style="list-style-type: none"> <input type="checkbox"/> Remove student from physical activity immediately. <input type="checkbox"/> Rule out more severe medical issues, including a severe traumatic brain injury. <input type="checkbox"/> Consider risk factors and evaluate for concussion complications. <input type="checkbox"/> Encourage rest. <input type="checkbox"/> Approve graduate return-to-play after determining student’s concussion symptoms have resolved and when documentation indicates the student is performing at pre-concussion cognitive demand levels at home and school.
<p><u>School Academic Team:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Administrator <input type="checkbox"/> 504 Coordinator <input type="checkbox"/> School Social Worker <input type="checkbox"/> Counselor <input type="checkbox"/> Teacher(s) <input type="checkbox"/> Classroom Paraprofessional 	<ul style="list-style-type: none"> <input type="checkbox"/> Remove student from all physical activity at school, including PE and recess. <input type="checkbox"/> Adjust academic demands. <input type="checkbox"/> Encourage “brain rest” breaks at school. <input type="checkbox"/> Monitor and document academic and emotional effects of the concussion. <input type="checkbox"/> Provide information regarding student’s pre-concussion academic functioning. <input type="checkbox"/> Assign an academic point person, typically principal or Counselor. <input type="checkbox"/> Teachers can gradually increase cognitive demands or reduce academic adjustments, as tolerated, using the decision-making flow-chart, or medical professionals guidelines.

<p>School Health Team:</p> <ul style="list-style-type: none"> <input type="checkbox"/> School Nurse <input type="checkbox"/> Coach <input type="checkbox"/> Physical Education Teacher <input type="checkbox"/> Athletic Director 	<ul style="list-style-type: none"> <input type="checkbox"/> Remove student from all physical activity immediately. <input type="checkbox"/> Support reduction of school demands and home/school Stimulation. <input type="checkbox"/> Provide encouragement to rest and take the needed time to heal. <input type="checkbox"/> Monitor and track symptoms of the concussion. <input type="checkbox"/> Appoint a physical team point person, usually the School Nurse. <input type="checkbox"/> May, but not required to, monitor the graduated return-to-play steps after receiving medical approval.
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At Collins-Maxwell CSD the Concussion Management Team will be made up of the following staff members:

Middle School/High School	Elementary School
Concussion Management Team Leader	Concussion Management Team Leader
School Academic Team Leader	School Academic Team Leader
School Physical Team Leader	School Physical Team Leader
504 Coordinator/Counselor	504 Coordinator/Counselor
Classroom Teacher	Classroom Teacher
Student's Licensed Health Professional	Student's Licensed Health Professional
Student/parents/guardians	Student/parents/guardians

Return to Learn

Returning to school should be determined based on each individual student's symptoms. No school, shortened school days, and allotted rest periods are some attendance alternatives that may be appropriate throughout the healing process. If symptoms recur after returning to school, brain activity should be decreased (rest time, school day lessened, etc.).

Most students will improve within 3 weeks of head injury/concussion; if not, a 504 plan should be considered. Students should be performing at their academic baseline (symptom-free) before returning to athletics. The student may be ready to return to school when he/she is beginning to tolerate 30-45 minutes of light cognitive activity. Typically, this should not require more than two or three days of absence from school, although each case will be managed individually. The

goal is to return the student to the classroom as soon as possible without causing symptoms to worsen. The following Table outlines a structured return-to-learn strategy and the goal of each stage.

Table 3: Graduated return to school strategy

Stage	Goal	Activity	Objective of each stage
1	Daily activities at home that do not give the child symptoms	Start with complete rest. Then add typical activities of the child during the day as long as the activities do not increase symptoms (e.g. reading, texting, screen time). Start with 5-15 minutes at a time and gradually increase if symptoms do not worsen. No school No physical activity	Gradual return to typical activities
2	School activities	Add homework, reading, or other cognitive tasks outside of the classroom. No physical activity	Increase tolerance to cognitive work
3	Return to school part-time	Gradual introduction of schoolwork. May need to start with a partial school day or with increased breaks during the day. Symptoms reported by student addressed with specific accommodations Eliminate busy work or items not essential to learning priority material Emphasis in this phase on in-school learning; rest is necessary once out of school; homework reduced or eliminated	Increase academic activities
4	Return to school full-time	Gradually progress to increased school activities until a full day can be tolerated. Construct a plan to finish completing missed academic work and keep stress levels low. No physical activity until released by a healthcare professional (such as physician or athletic trainer). Proceed to full days with no accommodations	Return to full academic activities and catch up on missed work as needed.

Academic Adjustments Protocol

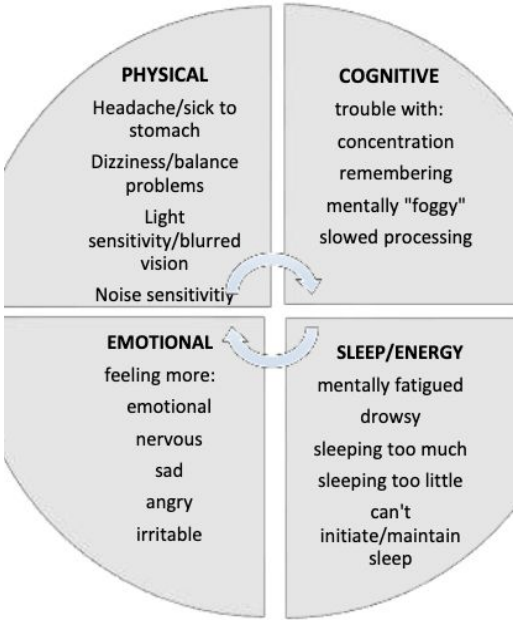
Although a health care provider may make recommendations regarding concussion management, a medical order or release is not required to initiate or modify academic adjustments or accommodations.

To support the student’s concussion recovery process, most adjustments will be made immediately following the injury, and as the student’s symptoms begin to resolve. Changes can be scaled back simultaneously as cognitive demands are increased. This approach provides the appropriate amount of cognitive rest, while supporting the student’s academic engagement. It is acceptable to have the student return to the classroom while they continue to experience symptoms as long as the symptoms are tolerable, manageable, and/or intermittent. Adjustments will be implemented in the general education classroom as soon as possible and be based on

the specific symptoms the student is experiencing. Academic and classroom adjustments can be implemented by using the interventions on the Symptom Wheel listed in Table 4.

During the first week of recovery, symptoms may need to be assessed daily, especially to monitor sleep/energy and emotional symptoms. Frequency of monitoring can be tapered during the subsequent weeks or recovery, assessing symptoms at least three times a week during the second week of recovery and at least twice during the third week. Further assessment monitoring will be determined by the Concussion Team, based on the individual student's needs. The information gathered should be used to monitor progress and modify adjustments during the student's recovery. The school academic team will use a feedback form to communicate student symptoms to the rest of the Concussion Team.

Table 4: Symptom wheel

<p>Physical:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Strategic rest scheduled 15-20 minute breaks in clinic/quiet space (mid-morning, mid-afternoon, and/or as needed) <input type="checkbox"/> Sunglasses (inside and outside) <input type="checkbox"/> Move student away from windows <input type="checkbox"/> Quiet room/environment, quiet lunch, quiet recess <input type="checkbox"/> More frequent breaks in classroom and/or in clinic <input type="checkbox"/> Allow quiet passing in halls <input type="checkbox"/> REMOVE from PE, physical recess, and dance classes without penalty <input type="checkbox"/> Sit out of music, band, and computer classes if increase in symptoms with these activities 	<p style="text-align: center;">Symptom Wheel Suggested Academic Adjustments (McAvoy, 2013)</p> 	<p>Cognitive:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Reduce workload in the classroom/homework <input type="checkbox"/> Remove non-essential work <input type="checkbox"/> Reduce repetition of work <input type="checkbox"/> Adjust due dates; allow extra time for work <input type="checkbox"/> Allow student to audit classwork <input type="checkbox"/> Exempt/postpone large tests/projects; alternate testing <input type="checkbox"/> Allow demonstration of learning in alternative fashion <input type="checkbox"/> Provide written instructions <input type="checkbox"/> Allow for teacher notes, study guides, word banks <input type="checkbox"/> Allow for technology (tape recorder, smart phone) if tolerated
<p>Emotional:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Allow student to have "signal" to leave room <input type="checkbox"/> Help staff understand that mental fatigue can manifest in emotional ways <input type="checkbox"/> Allow student to remove him/herself to de-escalate <input type="checkbox"/> Allow the student to visit with supportive adult (counselor, nurse, advisor) <input type="checkbox"/> Watch for secondary symptoms of depression and anxiety, usually due to social 		<p>Sleep/Energy:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Allow for rest breaks either in classroom or clinic <input type="checkbox"/> Allow student to start school later in the day <input type="checkbox"/> Allow student to leave school early <input type="checkbox"/> Alternate mental challenge with mental rest

isolation, concern over make-up work, and slipping grades		
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The goal for academic adjustments is that the student will be able to demonstrate mastery of learning standards and benchmarks. One method for helping teachers implement adjustments is to categorize each of the pieces of a lesson plan in one of three ways: (1) excused work, (2) accountable or negotiable work, or (3) required work.

“Excused work” includes the in-class and homework assignments or projects that are not required and do not need to be made up later. “Accountable/negotiable work” includes content that is required, but for which the process can be modified (e.g. alternate assignments). Finally, “required work” includes assignments and exams that must be completed by the student and will be graded. If adjustments that modify standards and benchmarks are needed, a meeting with administration should be considered.

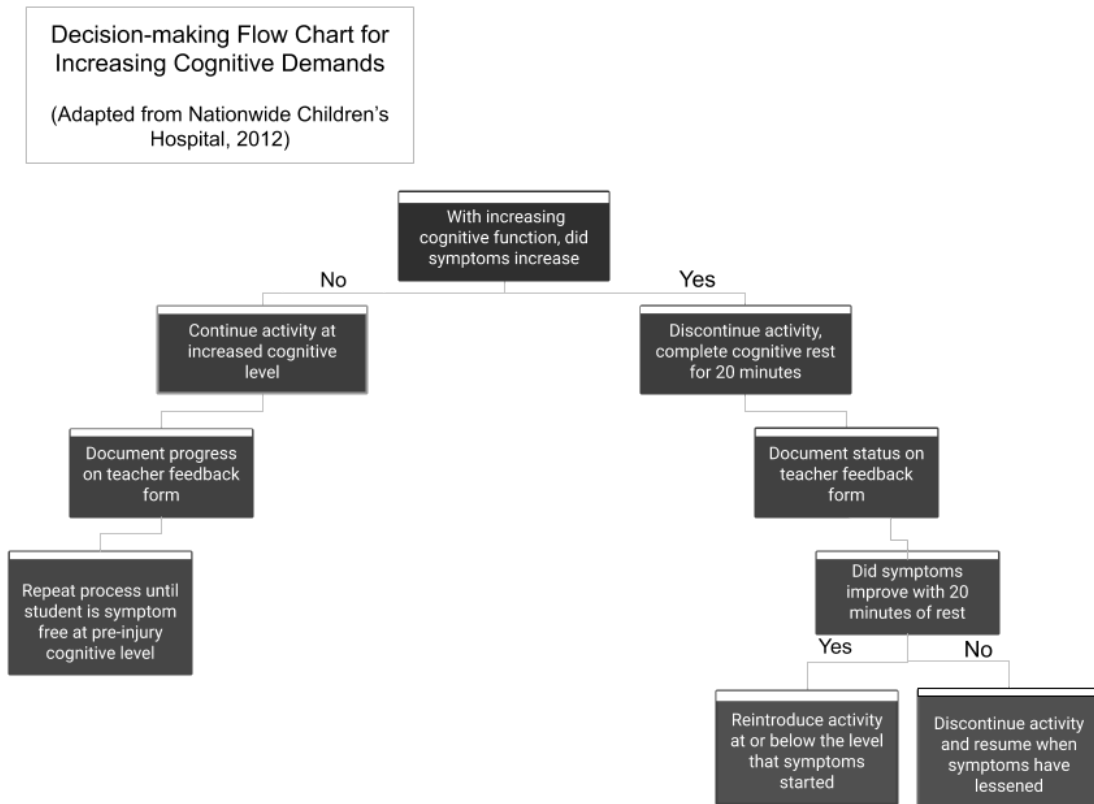
During concussion recovery, the goal is to have the student participate in learning without exacerbating concussion symptoms. Implementing frequent, objective assessments of the student’s concussion symptoms is the only way to evaluate the balance between sufficient academic adjustments and cognitive demands. The following discusses testing cognitive workload, this is also outlined in Figure 1.

- As the student improves, gradually increase demands on the brain by increasing either:
 - The amount of work
 - The length of time spent on work
 - The difficulty of the work

*** IMPORTANT: *** Change only ONE of these things at a time.

- If symptoms do not worsen, demands may continue to be gradually increased
- If symptoms do worsen, the activity should be discontinued for at least 20 minutes and the student allowed to rest.
 - If the symptoms are relieved with rest, the student may re-attempt the activity at or below the level that produced symptoms.
 - If the symptoms are not relieved with rest, the student should discontinue for the day and re-attempt when symptoms have lessened (such as the next day).

Figure 1: Decision-making flow chart for increasing cognitive demands



The following recommendations should be considered when the student is struggling to learn new information, or is not able to fully participate in class:

- Determine which material is the most critical for the student to receive and to be held responsible. Because the learning process is compromised after a concussion, the teacher must choose which parts of the lesson plan are the most important.
- Remove or excuse the student from tests or large projects. Testing while the student is cognitively compromised may not accurately reflect the student's skills. This is especially applicable for high stakes tests and projects.
- Standardized tests should be avoided, or appropriate testing adjustments should be provided.
- Focus on ensuring the student understands the material rather than requiring memorization of facts.
- Remove in-class work and homework that is not essential. It is not practical to expect the student to make up all the work that was missed or delayed while recovering from a concussion.

Graduated Return to Play (RTP)

Best practice for concussion management includes ensuring the student being symptoms free prior to the health care professional approving and monitoring a graduated return-to-play process (see Table 5). If the student is receiving any concussion-related academic adjustments in relation to a concussion, they are not yet ready to return-to-play. Returning to pay and activity following a concussion is a medical decision that should include the following criteria:

- The student is symptom free at home, interacting with friends and family normally, and documented symptoms should be a baseline or zero.
- Academic adjustments are no longer required, and the student is symptom free at school and performing at their pre-concussion levels for schoolwork and during social activities. This includes the CMT reporting the student's test scores, workload, and homework are back to where they were before the injury, and teacher observations include the student is no longer exhibiting signs of concussion, as well as being without symptoms when in loud, busy environments such as hallways, assemblies, and lunchroom.
- If applicable, the student's neurocognitive testing scores are back to baseline.
- The licensed athletic trainer, if involved, reports that the student is 100 percent symptoms free
- The student is no longer taking any concussion-related medications, including over-the-counter medications used to treat headache or pain related to the concussion.

If the student does not meet the above criteria, they are not ready to begin the graduated RTP steps. Students should not receive final written medical clearance until they have demonstrated successful completion of all six stages of the graduated RTP process. Clearance by a licensed medical professional is required by Iowa code.

Table 5: Graduated return to play stages (McCrary et al., 2017).

Stage	Activity	Functional exercise at each stage of rehabilitation	Objective of Stage
1	Symptom-limited activity	Daily activities that do not provoke symptoms	Recovery
	<i>When 100 percent symptom-free for 24 hours proceed to Stage 2, recommend longer periods without symptoms at each stage for younger students/athletes</i>		
2	Light aerobic exercise	Walking or stationary cycling at slow to medium pace, no resistance training.	To evaluate symptoms with increase in heart rate
	<i>If symptoms reappear with this level of exertion, then return to the previous stage. If the student remains symptom-free for 24 hours after this level of exertion, then proceed to the next stage.</i>		

3	Sport-specific exercise	Running or skating drills, no head-impact activities	To evaluate symptoms when adding movement
	<i>If symptoms reappear with this level of exertion, then return to the previous stage. If the student remains symptom-free for 24 hours after this level of exertion, then proceed to the next stage.</i>		
4	Non-contact training drills	Progression to more complex training drills, e.g. passing drills in football and ice hockey. May start progressive resistance training.	To evaluate symptoms with moderate exercise, and using coordination and increased cognition
	<i>If symptoms reappear with this level of exertion, then return to the previous stage. If the student remains symptom-free for 24 hours after this level of exertion, then proceed to the next stage.</i>		
5	Full-contact practice	Following medical clearance, participate in normal training activities.	To restore confidence and assess functional skills by coaching staff
	<i>If symptoms reappear with this level of exertion, then return to the previous stage. If the student remains symptom-free for 24 hours after this level of exertion, then proceed to the next stage.</i>		
6	Return-to-play	Normal game play	No restrictions, evaluate complete return to full activities.

Appendix A: Symptom Checklist

Credit: HCA HeathONE, 2016

Student Name:		Date:		Time:			
<input type="checkbox"/> Baseline <input type="checkbox"/> Post-injury							
Person completing checklist (if not student):							
Symptoms		Severity Rating					
I feel like I'm going to faint	0	1	2	3	4	5	6
I'm having trouble balancing	0	1	2	3	4	5	6
I feel dizzy	0	1	2	3	4	5	6
It feels like the room is spinning	0	1	2	3	4	5	6
Things look blurry	0	1	2	3	4	5	6
I see double	0	1	2	3	4	5	6
I have headaches	0	1	2	3	4	5	6
I feel sick to my stomach (nauseated)	0	1	2	3	4	5	6
Noise/sound bothers my eyes	0	1	2	3	4	5	6
The light bothers my eyes	0	1	2	3	4	5	6
I have pressure in my head	0	1	2	3	4	5	6
I have numbness/tingling	0	1	2	3	4	5	6
I have neck pain	0	1	2	3	4	5	6
I have trouble falling asleep at night	0	1	2	3	4	5	6
I feel like I am not getting enough sleep	0	1	2	3	4	5	6
I have low energy (fatigue)	0	1	2	3	4	5	6
I feel tired a lot (drowsiness)	0	1	2	3	4	5	6
I have trouble paying attention	0	1	2	3	4	5	6
I am easily distracted	0	1	2	3	4	5	6
I have trouble concentrating	0	1	2	3	4	5	6

I have trouble remembering things	0	1	2	3	4	5	6
I have trouble following directions	0	1	2	3	4	5	6
I feel like I am moving at a slower speed	0	1	2	3	4	5	6
I don't feel "right"	0	1	2	3	4	5	6
I feel confused	0	1	2	3	4	5	6
I have trouble learning new things	0	1	2	3	4	5	6
I feel like my thinking is "foggy"	0	1	2	3	4	5	6
I feel sad	0	1	2	3	4	5	6
I feel nervous	0	1	2	3	4	5	6
I feel irritable or grouchy	0	1	2	3	4	5	6
I feel more emotional	0	1	2	3	4	5	6
Other:	0	1	2	3	4	5	6

Severity Rating, zero=no problem with item, 6=worst it could be
For baseline, student should rate symptoms based on how he/she typically feels
For post-injury, student should rate symptoms at this point in time

Appendix B: Teacher feedback form

Teacher Feedback Form

Student Name: _____

Date: _____

Teacher Name: _____

Class: _____

Student: As part of your concussion recovery monitoring, it is your responsibility to gather data from our teachers. A day or two before your next concussion follow up appointment with the concussion management team, or healthcare provider, please take this sheet to your teachers.

Teachers: Thank you for your help with this student. Your feedback is very valuable. We do not want to release this student back to physical activity if you are still seeing physical, cognitive, emotional, or sleep/energy symptoms in your classroom. Use the space below to share any concerns you may have regarding the student's post-concussion related performance.

Is the student still receiving any academic adjustments in your class? If so, list. <input type="checkbox"/> Yes <input type="checkbox"/> No	Have you recently noticed, or has the student reported, experiencing any concussion symptoms? If so, list. <input type="checkbox"/> Yes <input type="checkbox"/> No

Do you believe this student is performing at their pre-concussion learning level? Yes

No

Teacher Signature: _____