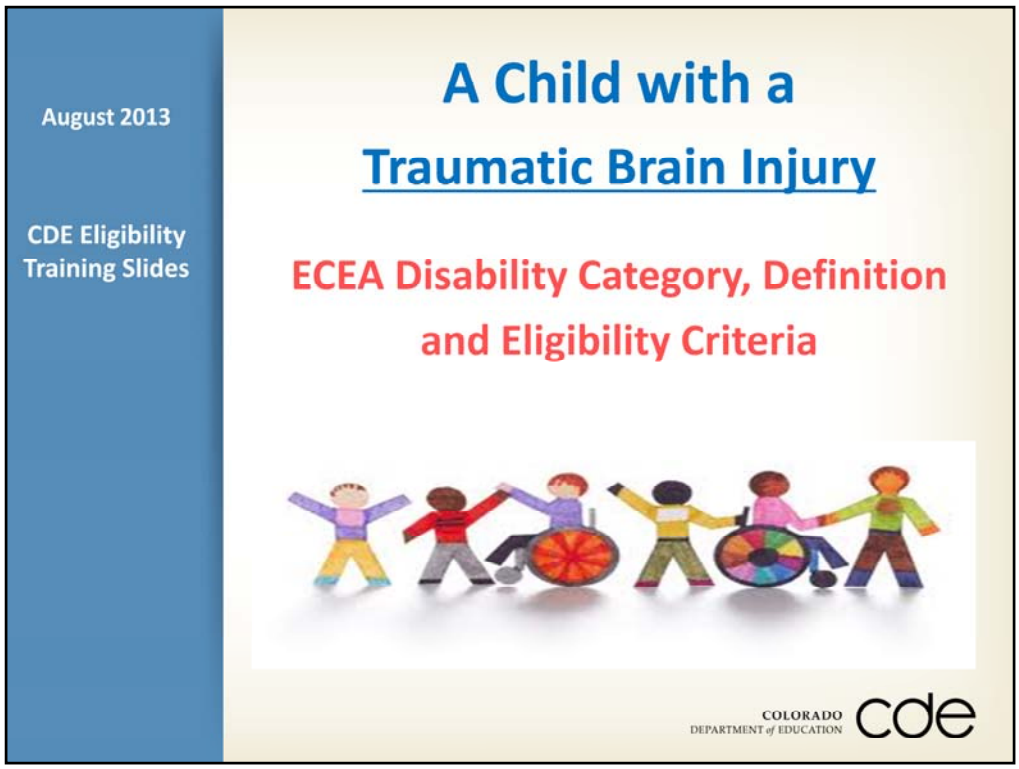

The following slides provide guidance on the eligibility category, definition, and criteria for "child with a traumatic brain injury" in Colorado public schools.

These slides may also be found within the Comprehensive Overview Training PowerPoint, which provides guidance on every eligibility category.

If these slides are used as a self-standing training tool, it is recommended that they be supplemented with the posted slides specific to the HB11-1277 Overview, which can be found at: http://www.cde.state.co.us/cdesped/Training_ECEAEligibility.asp

The HB11-1277 Overview slides will detail the history and timelines of implementation of the new eligibility categories, definitions, and criteria.

Together We Can

Vision

All students in Colorado will become educated and productive citizens capable of succeeding in a globally competitive workforce.

Mission

The mission of CDE is to shape, support, and safeguard a statewide education system that prepares all students for success in a globally competitive world.

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Traumatic Brain Injury

- The following slides have been vetted internally within the Colorado Department of Education for training purposes of the definition and eligibility criteria for Traumatic Brain Injury.
- If you make any changes to these slides, please acknowledge that they are different from this vetted product and may no longer represent the viewpoint of the CDE.

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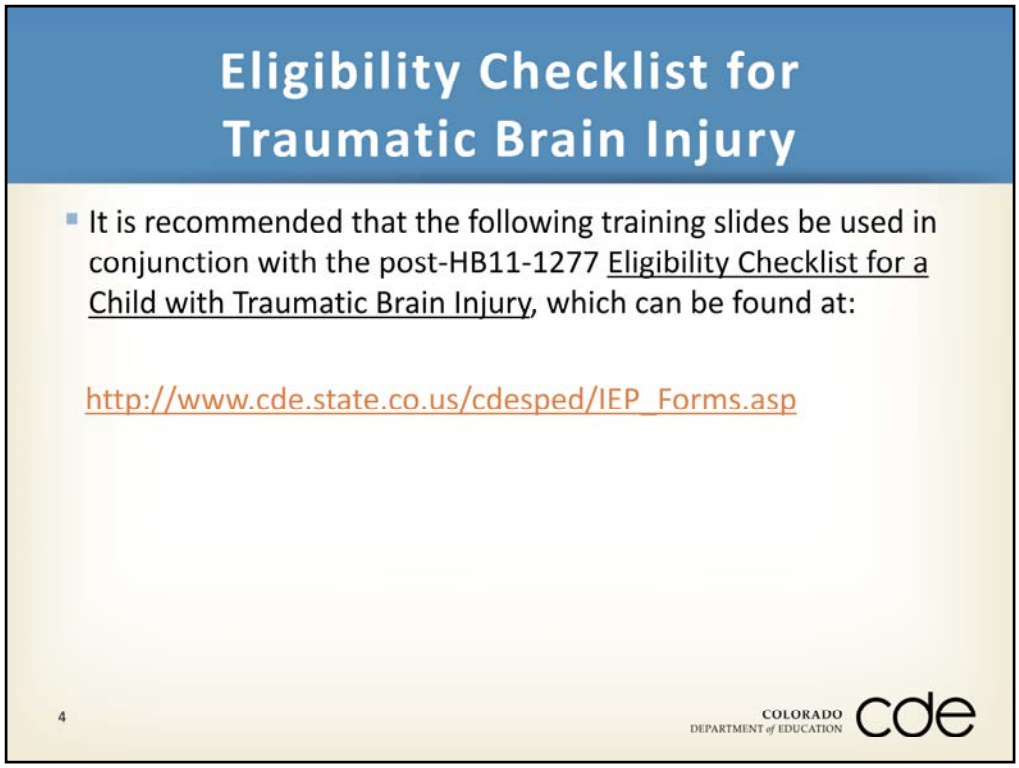
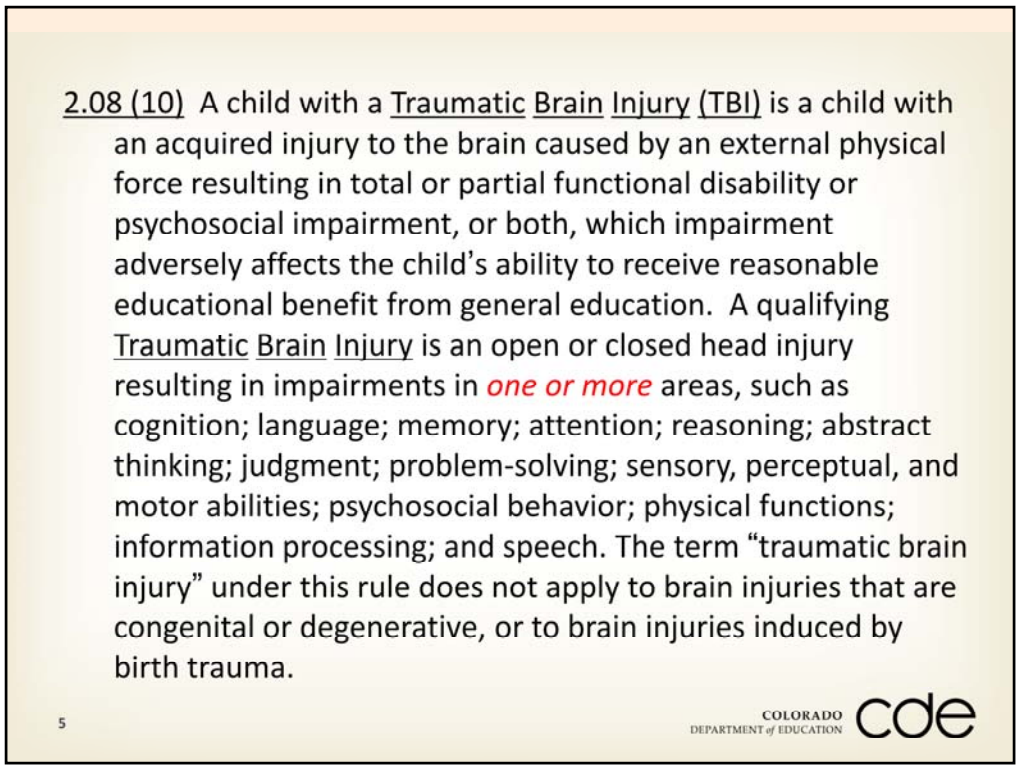


If there are any questions about the definition and eligibility criteria for Traumatic Brain Injury, please be in contact with Heather Hotchkiss at hotchkiss_h@cde.state.co.us or (303) 866-6739.

If there are any questions about whether a specific child meets the established criteria for Traumatic Brain Injury, please be in contact with the administrative unit's Special Education Director.



The next four slides include the exact wording of a Child with a Traumatic Brain Injury eligibility criteria that are in the current *Rules for the Administration of the Exceptional Children's Educational Act 1 CCR 301-8*

What is Traumatic Brain Injury?

In the past in Colorado, TBI used to listed under Physical disability. Now (as of Oct. 2012) TBI is a stand alone eligibility area with it's own definition and criteria. When looking at the definition, Colorado began with the Individuals with Disabilities Education Act (IDEA) definition (created in the early 1990s) and added a bit more detail to create our definition for the Exceptional Children's Education Act (ECEA).

Note: TBI does not apply to congenital or degenerative, or to brain injuries induced by birth trauma

2.08 (10) (a) To be eligible as a child with a Traumatic Brain Injury, there must be evidence of the following criteria:

2.08 (10) (a) (i) Either medical documentation of a traumatic brain injury, or a significant history of one or more traumatic brain injuries reported by a reliable and credible source and/or corroborated by numerous reporters; and

2.08 (10) (a) (ii) The child displays educational impact most probably and plausibly related to the traumatic brain injury.

2.08 (10) (b) Additionally, to be eligible as a child with a Traumatic Brain Injury, the traumatic brain injury prevents the child from receiving reasonable educational benefit from general education as evidenced by one or more of the following:

2.08 (10) (b) (i) A limited ability to sustain attention and/or poor memory skills, including but not limited to difficulty retaining

short-term memory, long-term memory, working memory and incidental memory;

2.08 (10) (b) (ii) An inefficiency in processing, including but not limited to a processing speed deficit and/or mental fatigue;

2.08 (10) (b) (iii) Deficits in sensory-motor skills that effect either one, or both, visual or auditory processing, and may include gross motor and/or fine motor deficits;

2.08 (10) (b) (iv) Delays in acquisition of information including new learning and visual-spatial processing;

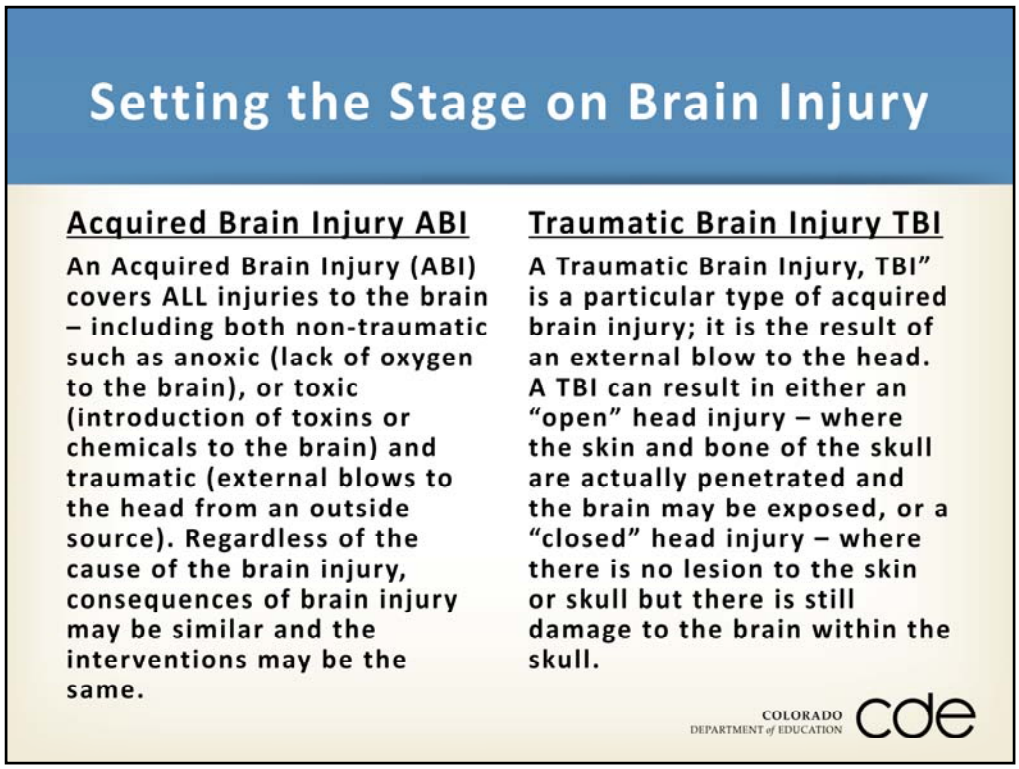
2.08 (10) (b) (v) Difficulty with language skills, including but not limited to receptive language, expressive language and social pragmatics;

2.08 (10) (b) (vi) Deficits in behavior regulation, including but not limited to impulsivity, poor judgment, ineffective reasoning and mental inflexibility;

2.08 (10) (b) (vii) Problems in cognitive executive functioning, including but not limited to difficulty with planning, organization and/or initiation of thinking and working skills;

2.08 (10) (b) (viii) Delays in adaptive living skills, including but not limited to difficulty with activities of daily living (ADL); and/or

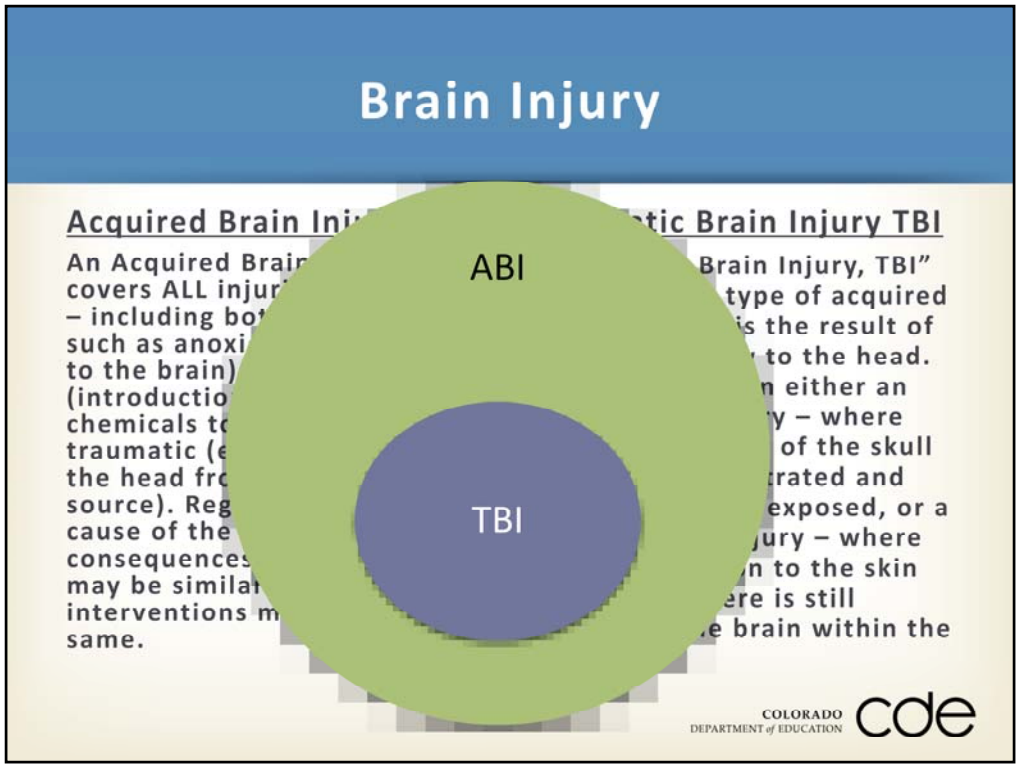
2.08 (10) (b) (ix) Delays in academic skills, including but not limited to reading, writing, and math delays that cannot be explained by any other disability. They may also demonstrate an extremely uneven pattern in cognitive and achievement testing, work production and academic growth.



What is Traumatic Brain Injury?

TBI is an Acquired Brain Injury (ABI) – a typically developing child/infant and then an injury occurs. ABI covers ALL injuries to the brain post birth; both Non-Traumatic (Anoxia, Toxins, near drowning, etc.) and Traumatic.

Traumatic Brain Injury (TBI) is an external blow. Injury may result in an open or closed head injury. Injury may result in "structural" damage and/or "electrical" damage in the brain (electrical damage is not seen on a CT Scan or MRI).



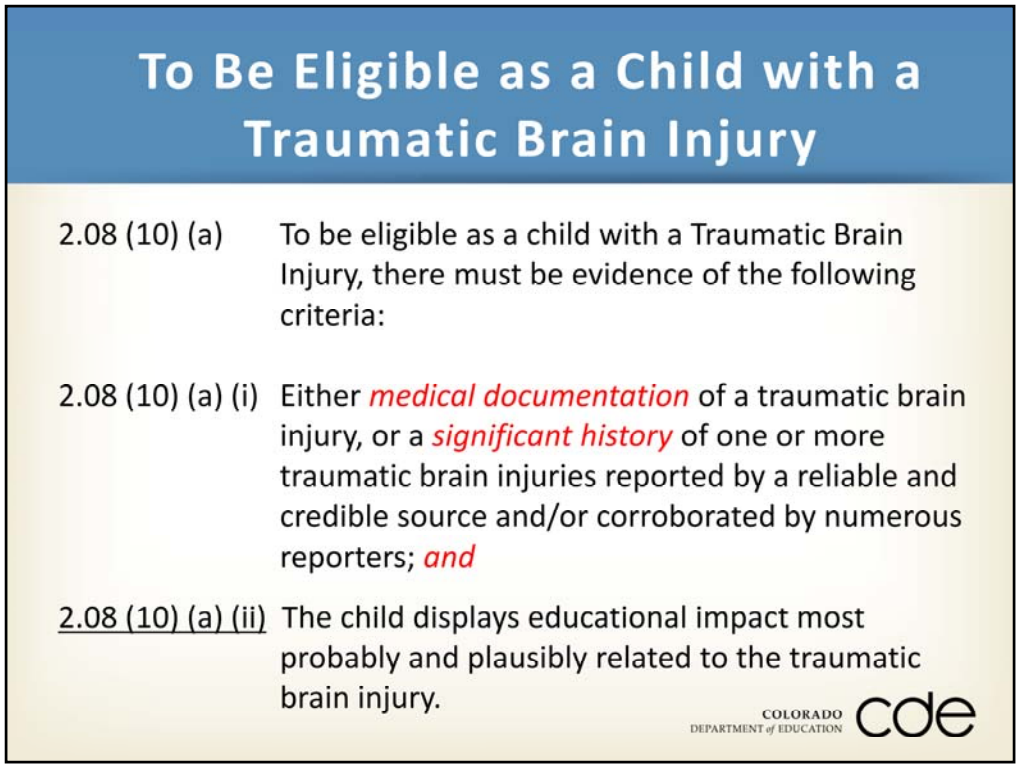
TBI is a small percentage of ABI

ABI would need to be staffed under another disability category (i.e. other health impaired); however the information offered here is applicable to all acquired brain injuries (Non-Traumatic and Traumatic); this will assist school teams in identifying the specific impacts and address the needs appropriately.

One area that is significant with all types of brain injuries is unevenness in skills and learning. It is important to address this unevenness through the "lens" of brain injury (for appropriate interventions).

We are going to review eligibility criteria in TBI only, however the same information, assessments, areas would apply to non-traumatic brain injury.

Note: the mechanism of the injury will uniquely affect the grieving process and information coming forward…"traumatic" events = traumatic brain injury (physical abuse, falling down the stairs when the parent turned their back for a moment, parent was driving the car when the motor vehicle accident happened, etc.)



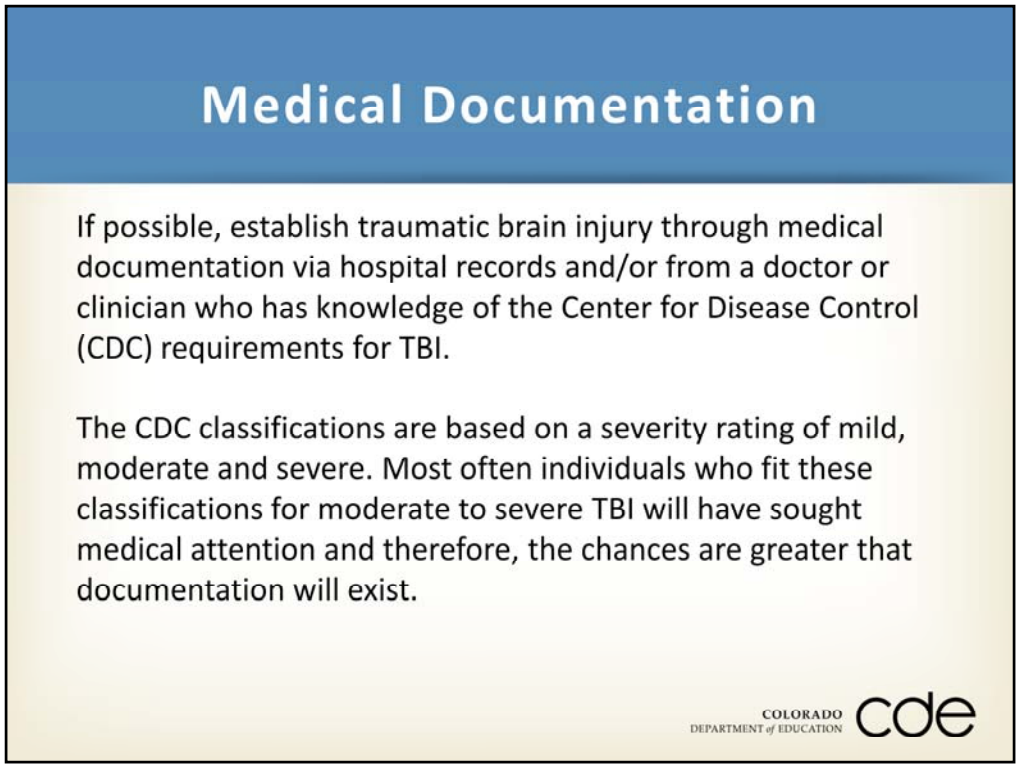
What is the criteria/How to establish?

When TBI was under the Physical Disability eligibility category, we did not have guidance on the criteria.

Determination of Eligibility for TBI has been expanded to include guidance in the area of **Credible History**. The criteria includes: Medical Documentation of TBI ***or*** Credible History of TBI ***and*** Educational Impact

For TBI: since the federal definition (1991), the numbers of identified students have not increased much even though it's the leading cause of death and disability in the US for children ages 1-19 yrs. Unlike some other disability areas – i.e. Autism Spectrum Disorder (ASD) where numbers has increased drastically.

It is a tracking issue. Statistics: CO estimates approximately 700 kids are hospitalized each year for TBI, and they don't get hospitalized (stay over night) unless it's been determined as moderate to severe. Think about the kids with more mild Brain Injuries who are either not going to the hospital or are treated and released…over half a million (nation-wide) each year. We aren't tracking these children at all – and yes, many will resolve and not have long term impacts. But about 10-20% will have some lasting impact.

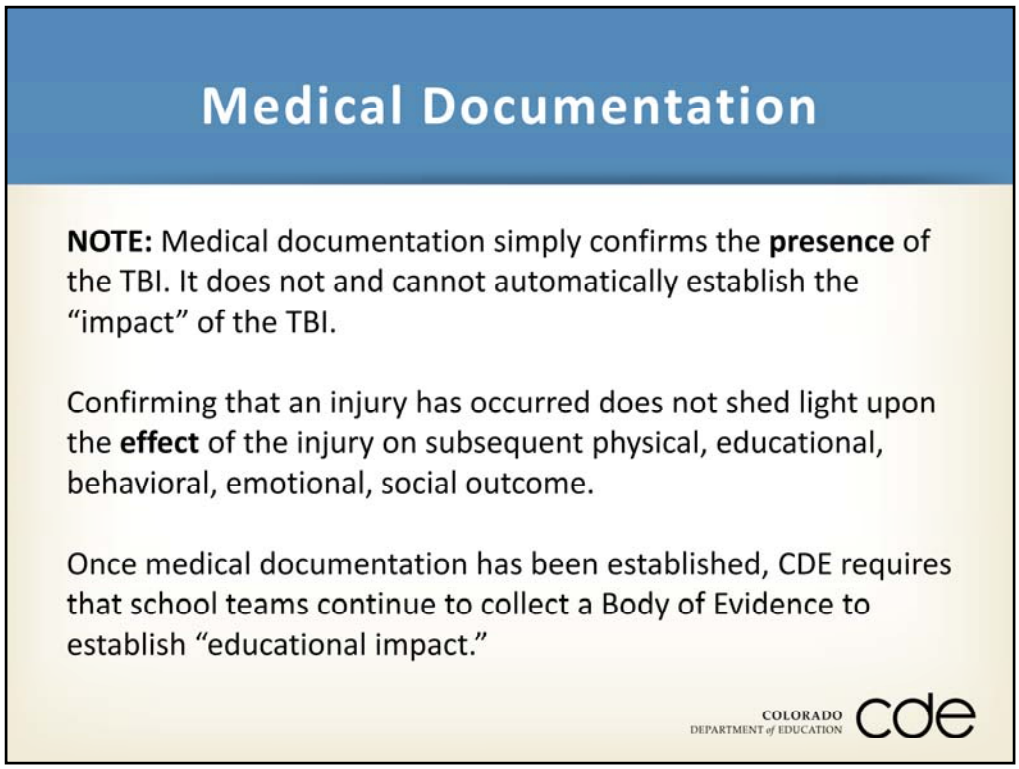


If we are given medical documentation we may see the following terms: Mild, Moderate and Severe

These are medical classifications – based on the Glasgow Coma Scale. These are based on a medical classification at the time of injury (typically within 24-48hrs of the injury/incident).

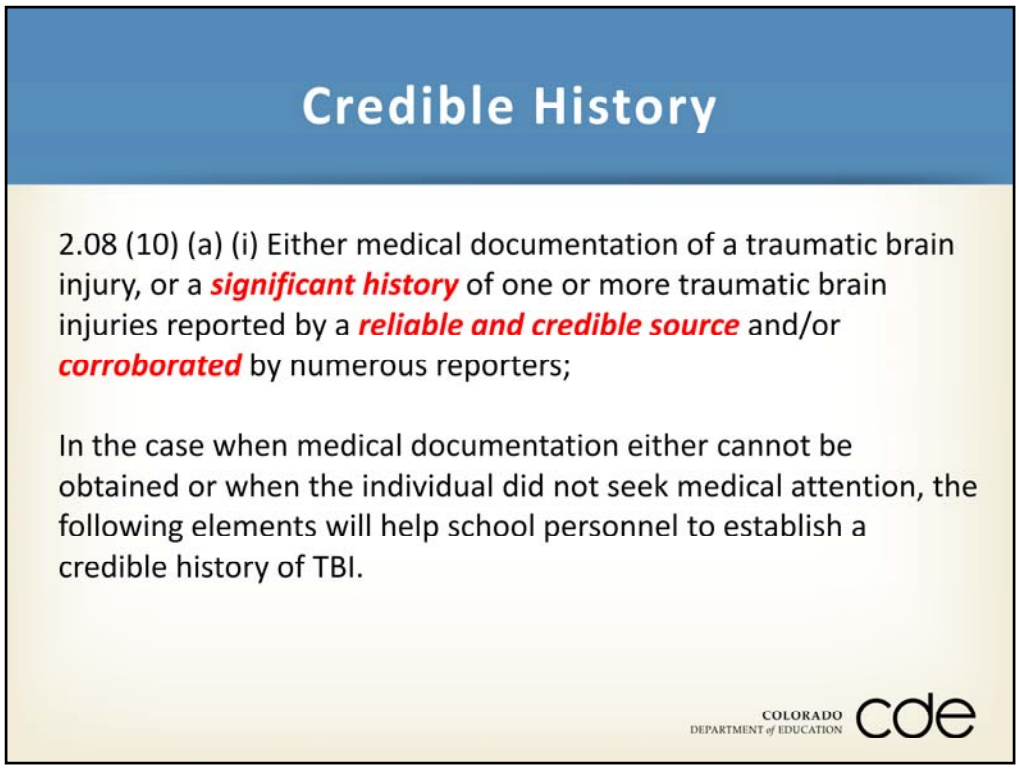
These classifications **do not equate** to educational impact! Teams - be careful about the correlating the medical classification and functional impact.

Severe medical does not automatically equate to severe educational or long term impact. Just as mild does not equate to no long term impact.



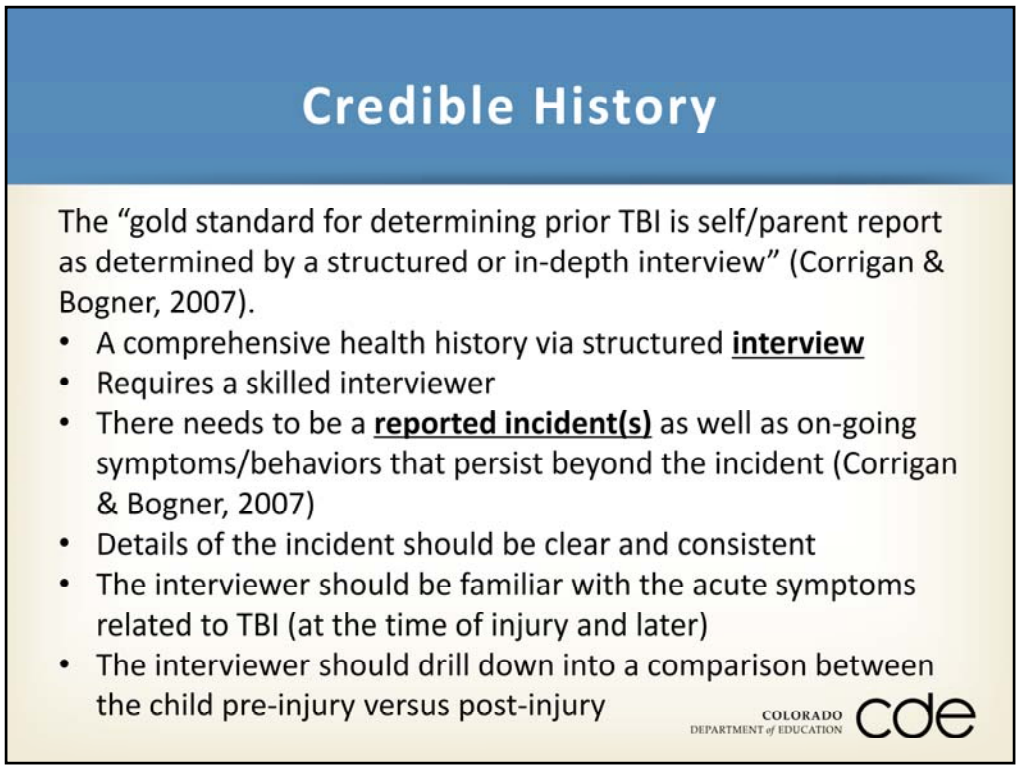
Moderate to Severe Brain Injury: Parents may have medical documentation – this confirms the presence of a TBI only.

If given medical documentation, we move to establishing educational impact.



What if there is no medical documentation (incident happened in a different country/state, the family moved around a lot, they didn't go to a doctor – "just a ding"). A very high percentage of children/families may not seek medical attention.

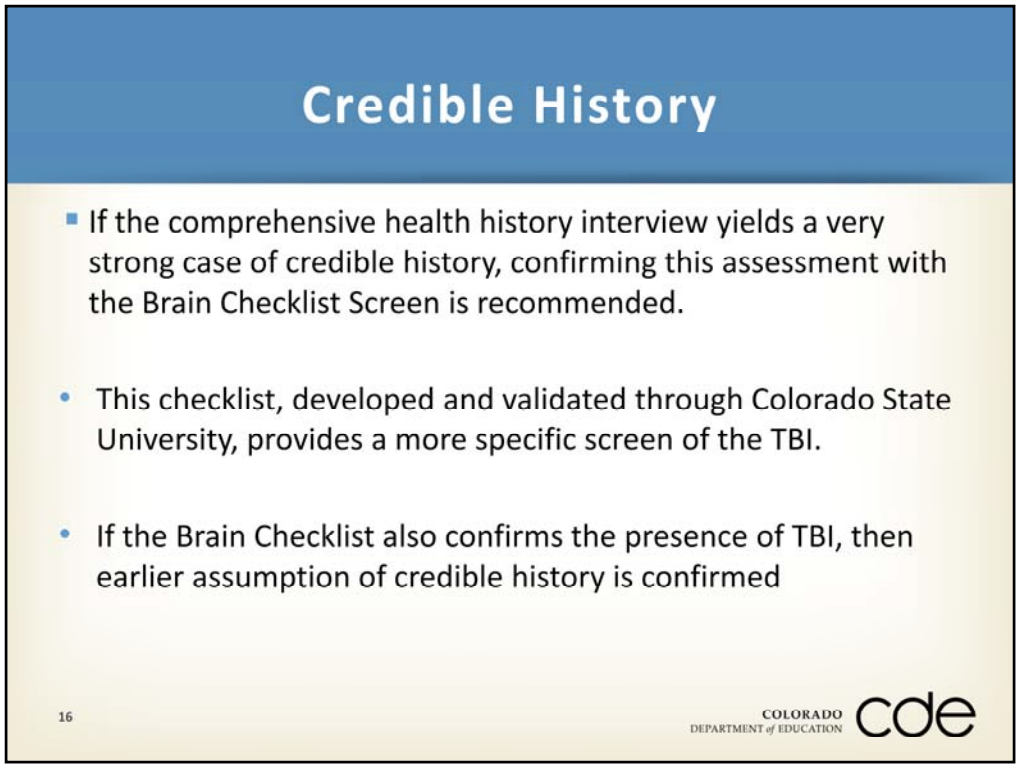
Credible history is much more difficult to establish – this is a Multidisciplinary Team responsibility.



(see additional handout on Credible History)
Credible History is determined by the team becoming detectives:

- An in depth developmental/health history
- A structured face to face interview
- By a skilled interviewer – develop a rapport with the family, is familiar with the symptoms related to TBI, able to ask pointed questions multiple times and in a variety of ways in order to establish the details of the TBI(s), changes in behavior, sleep patterns, etc.
- Must have a reported incident-if the parent does not give you an incident you CANNOT go down the path of TBI…an example is abuse…it may never come out specifically – and you may know something in your gut – however you cannot establish a credible history with TBI without a reported incident.

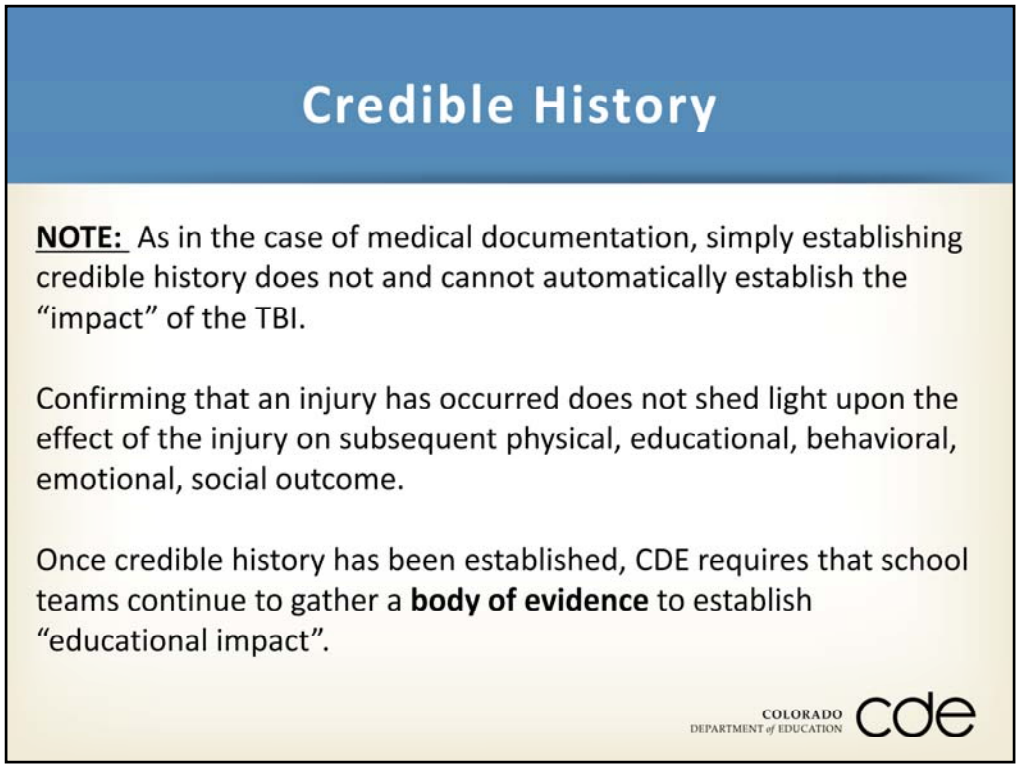
- This may look like the nurse talking with the grandmother, the social worker talking with the mother, etc. to look for corroboration.
- There could be a long history of BI – with high risk taking behaviors (get details of each BI-if more than one)
- You may need to ask the question 3 or 4 different ways: Has your child…ever had a brain injury…ever been knocked out…ever had his "bell rung" or "dazed?" …"Oh, you mean that time he fell out of the grocery cart?" [Remember: most may never lose consciousness]
- It must be plausible – "he seized for 3 days in the hospital"– talk to the nurse – would they let a child seize for 3 days?
- And "drill down" with the details and gathering of information; compare pre-injury functioning vs. post injury



If your teams "detective work" indicates a presence of a TBI, it is recommended to confirm this by doing the Brain Checklist – created by Colorado State University; and shown to be a valid measure for confirming TBI.

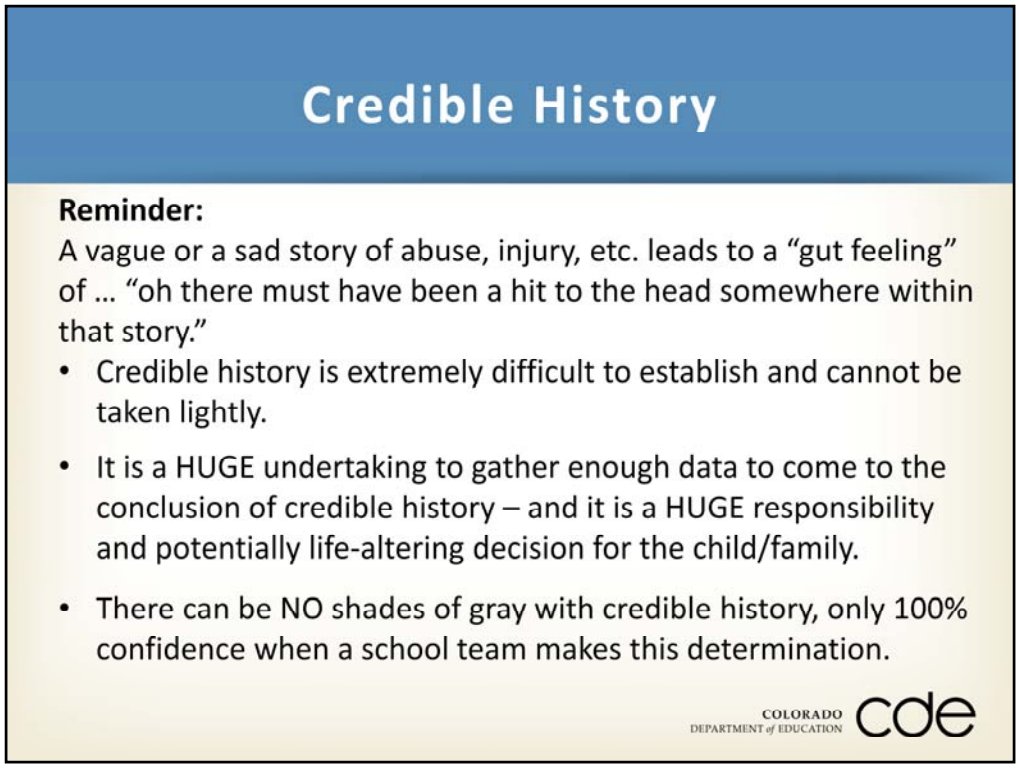
This tool is located in the manual for your use (Brain Injury in Children and Youth: A Manual for Educators). And at www.cokidswithbraininjury.com

CAUTION: we are not "diagnosing "TBI, we are still gathering data and confirming our information from the interview and confirming the presence of a TBI.



If the team establishes the presence of a TBI, we still must identify the effects of the TBI (educational impact).

Especially when an injury is "mild" – must gather a body of evidence (basically following the principles of RTI), please don't put off the gathering of this information and evaluation when a disability is suspected.

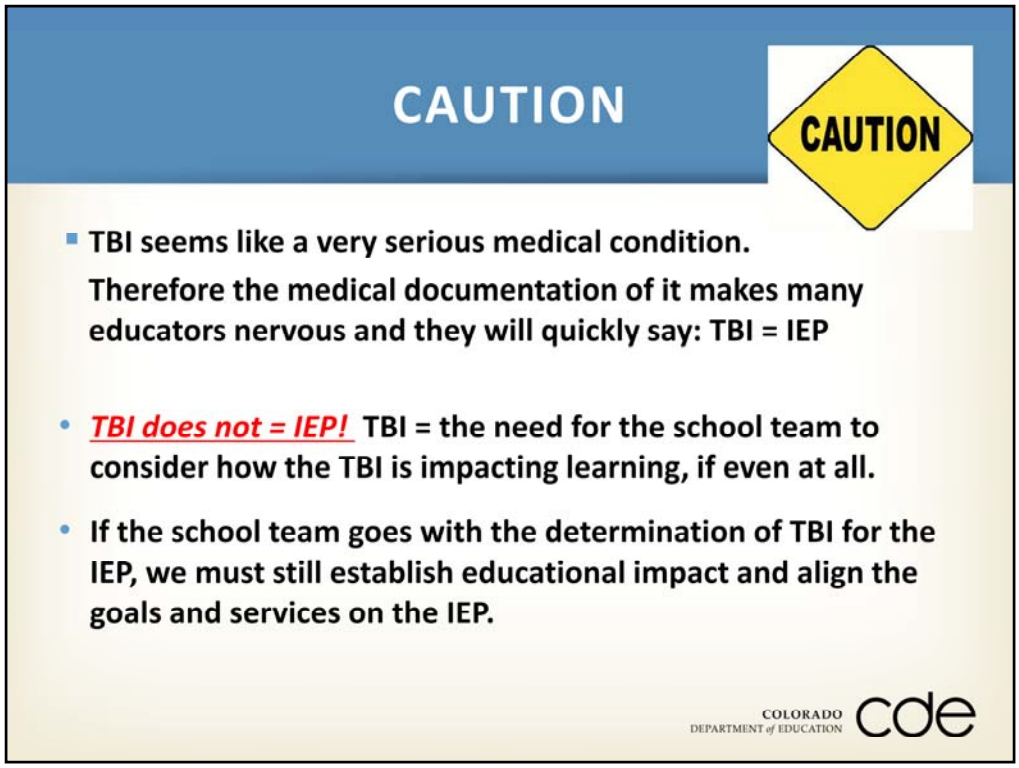


Even though our gut may tell us there is something there – or we have stories such as: a parent is in jail for domestic violence, former family member or partner was abusive, etc., this is not enough information to confirm a traumatic brain injury.

Err on the side of being conservative.

Do your detective work but if it is not there it is not there. Then we must look at other ways to support this child.

Credible History - It isn't easy to establish but it is a good thing that we have it now – we obviously are not picking up all of the need that exists in school districts. (current count = 497 kids on an IEP for TBI in CO)



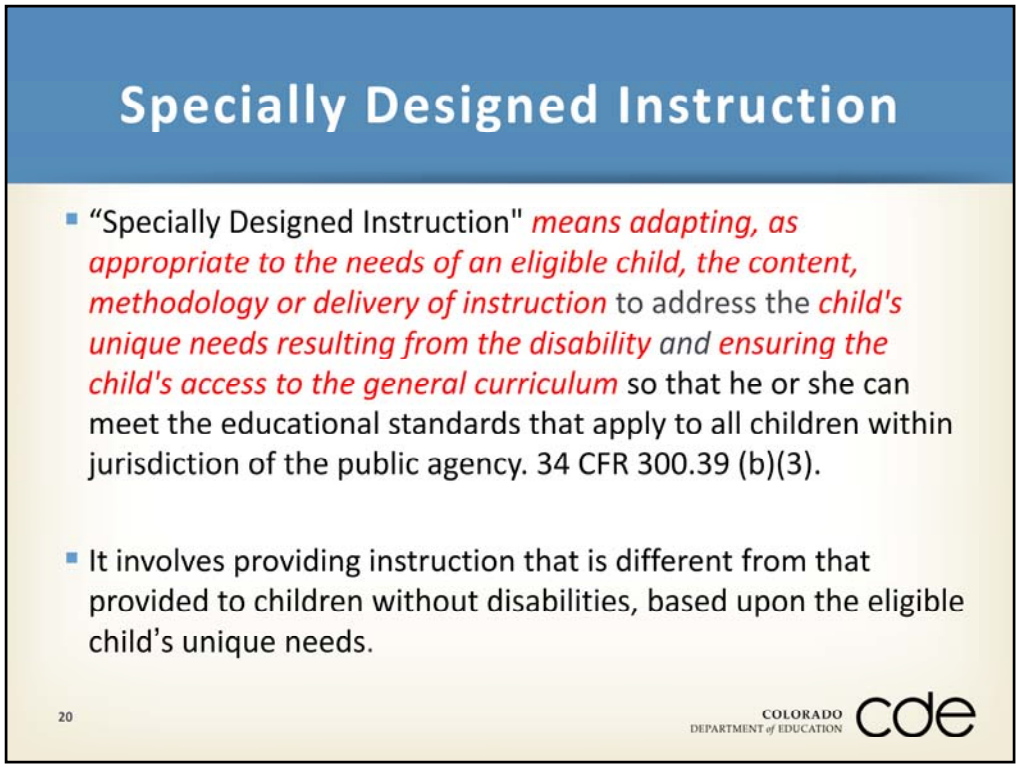
TBI is a serious medical condition – it's sometimes scary for educators…But confirming a TBI does not = IEP automatically.

We must follow the process

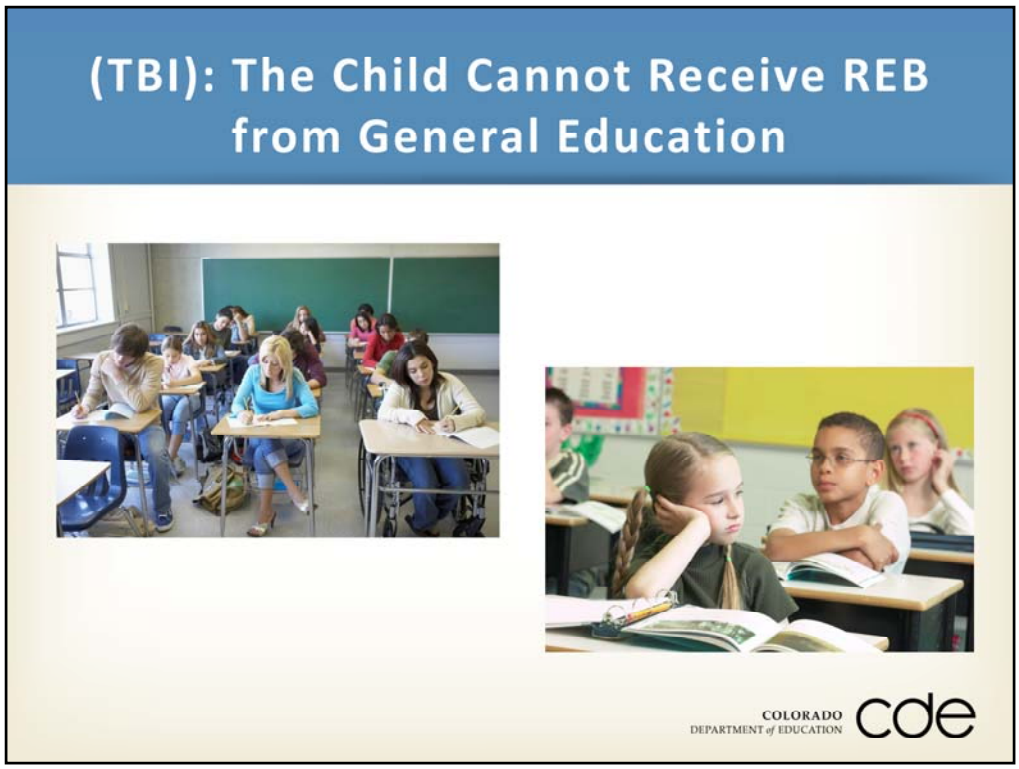
Identification Protocol – (see the Brain Injury in Children and Youth Manual or www.COkidswithbraininjury.com)

1. Reported Incident
2. Medical Documentation or
3. Credible History
4. TBI Screen
5. Establish Educational Impact

The entire multidisciplinary team must be on board and have the data to back up this criteria.



To qualify as a child with Traumatic Brain Injury, there must be evidence that the child cannot receive reasonable educational benefit from general education without specially designed instruction.



Reasonable **E**ducational **B**enefit = **REB**

To qualify as a child with Traumatic Brain Injury, there must be evidence that the child cannot receive reasonable educational benefit from general education without specially designed instruction. The specially designed instruction may involve training on the use of specialized equipment.

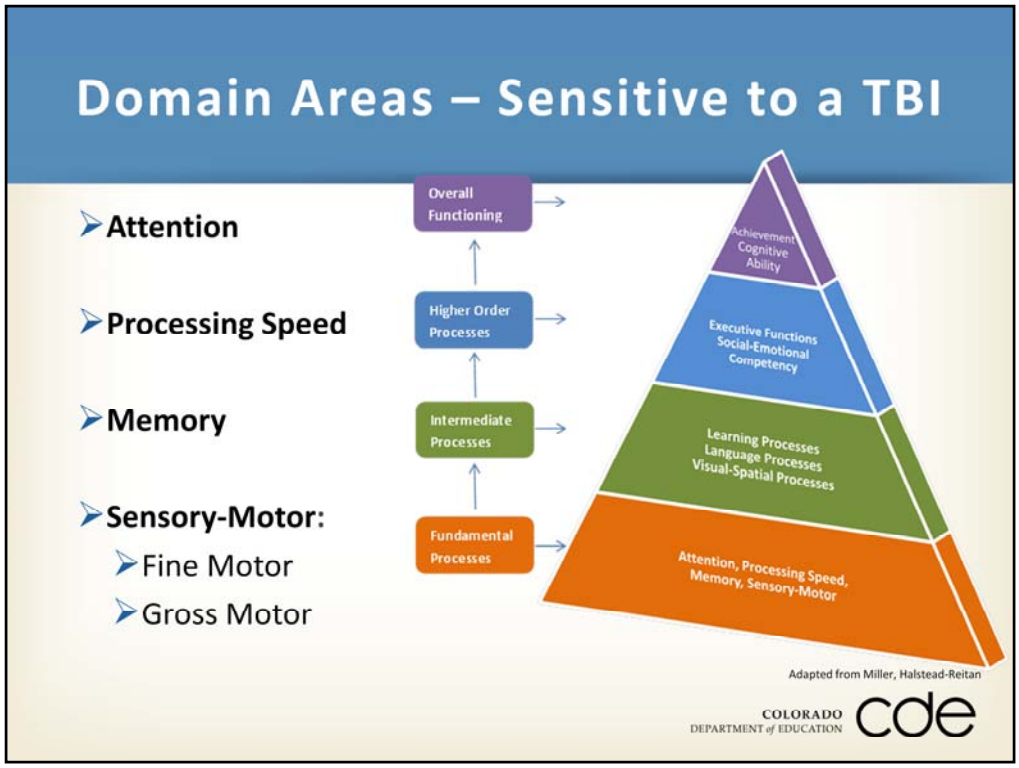
What are the typical areas of impact (domains)?

School Teams will need to establish the educational impact of the traumatic brain injury and determine whether the child can/cannot receive reasonable educational benefit in general education.

Teams gather the body of evidence:

- Using Classroom Teacher Input – *Brain Injury Observation Form* (located in the manual), developed by some of our local experts.
- Doing Functional Observations
- Formal and informal assessments

- So what areas does Brain Injury effect?

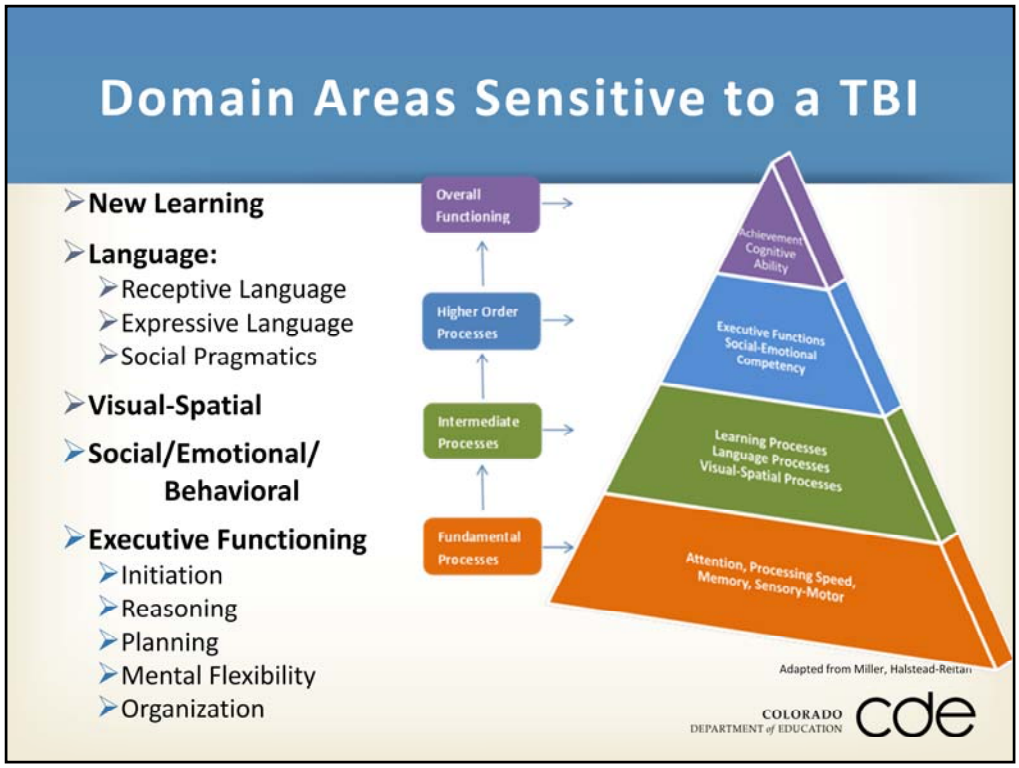


The domain areas included in the eligibility criteria (and here in this presentation) are very sensitive to TBI and the typical areas that are impacted…it is not an exhaustive list.

Refer to eligibility checklist - The order that the domain areas are listed in the TBI Eligibility Checklist match the Hierarchy of Neurocognitive Development (shown here in the pyramid).

Foundational Processes are the base of the pyramid – crucial building blocks for all other processes. Foundational processes effect all areas of learning and behavior. The stronger the foundation, the stronger and better the rest of the processes build.

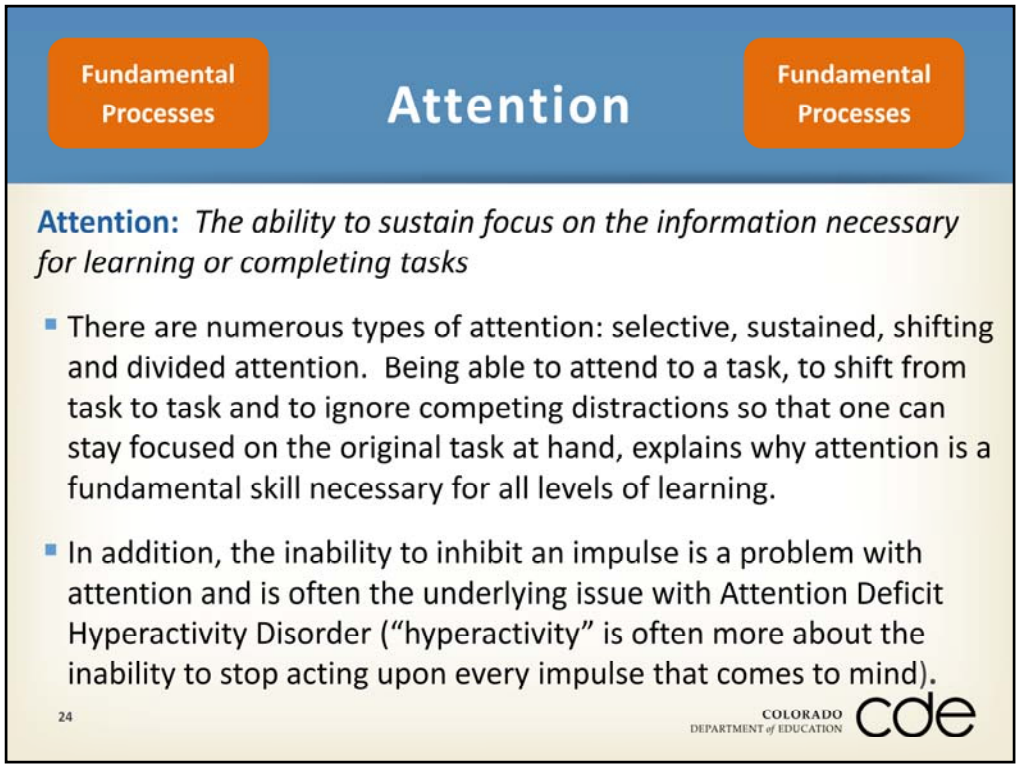
Color coded (and noted for black and white notes) throughout the rest of the presentation. Orange – these skills are what our babies are working on in early developmental stages=foundational processes.



Additional building blocks – intermediate and higher order

An injury at a young age creates this “wobbly” pyramid.

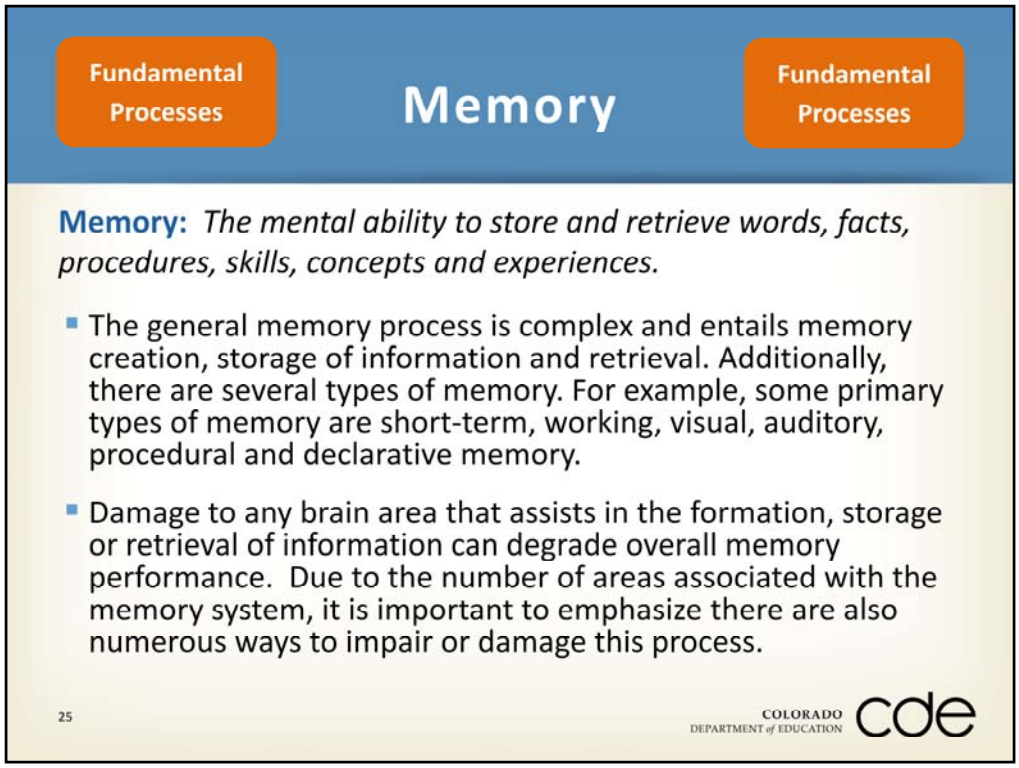
As educators we are all striving for Achievement and ability to integrate all of these skills (purple: top level of overall functioning)– we must look at the foundation or building blocks to get there.



Attention and concentration is impacted much of the time in brain injury.

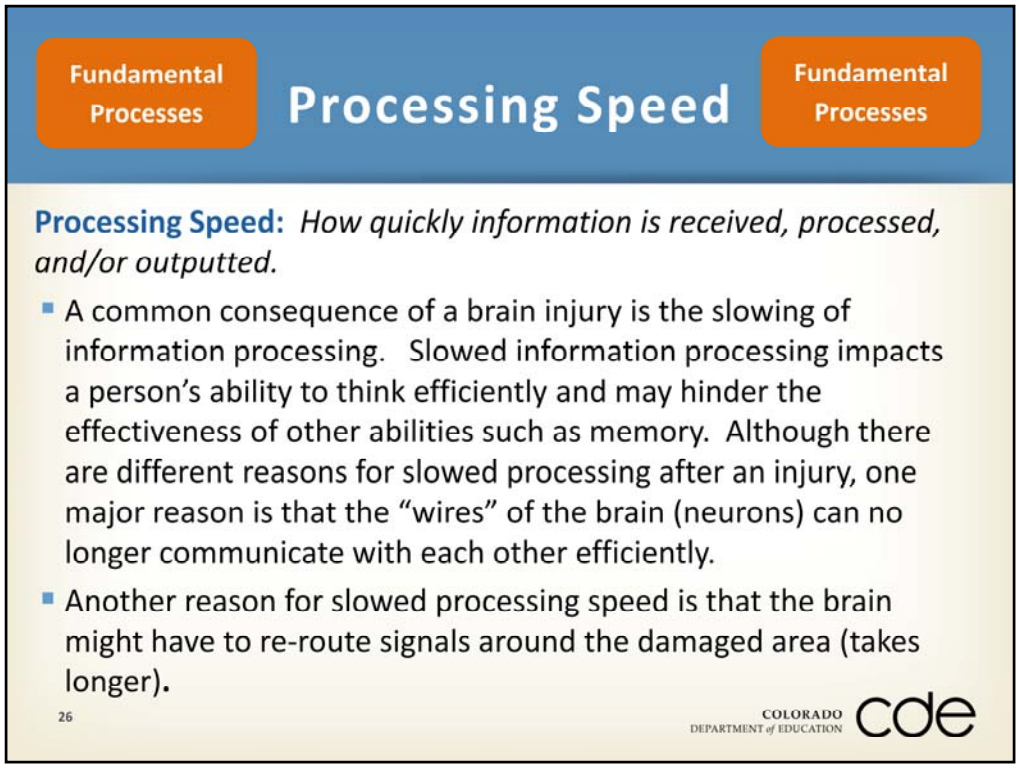
Attention and concentration involve holding information such as events, words and visuals in ones' awareness. Following injury, the brain is generally not as alert and is less able to sustain focus or filter sensory information.

May look like ADHD – a word of caution: do not rush to an ADHD label…children with TBI may respond VERY differently to typical treatment of ADHD (i.e., stimulants).

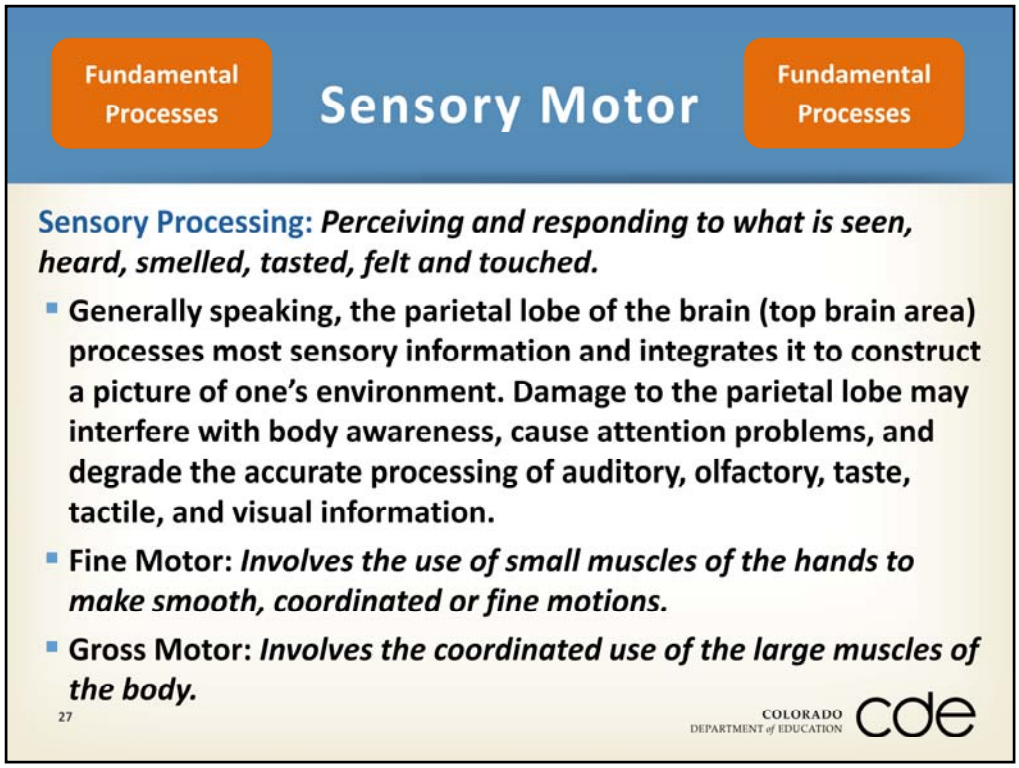


Memory and learning involve the storage and organization of information for later use.

A crucial building block for learning.

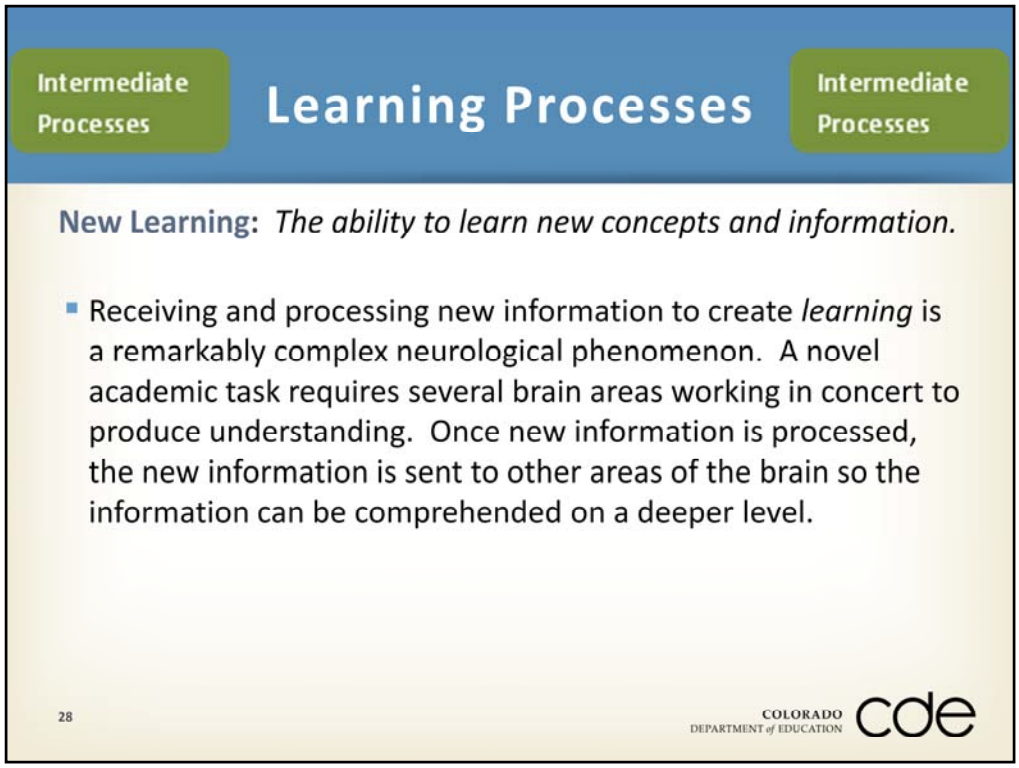


Processing speed is a mental function that is highly sensitive to brain injury. Teens are rarely aware of a decrease in their processing speed; rather, their experience is that they are confused or having a hard time understanding everything as well as before.



Children who have trouble perceiving and/or responding to sensory input obviously will be at a disadvantage when they have to integrate information coming from different sources.

Sensory issues may be viewed as other disability categories (i.e. Autism Spectrum Disorder, Sensory Integration Disorder, etc.)

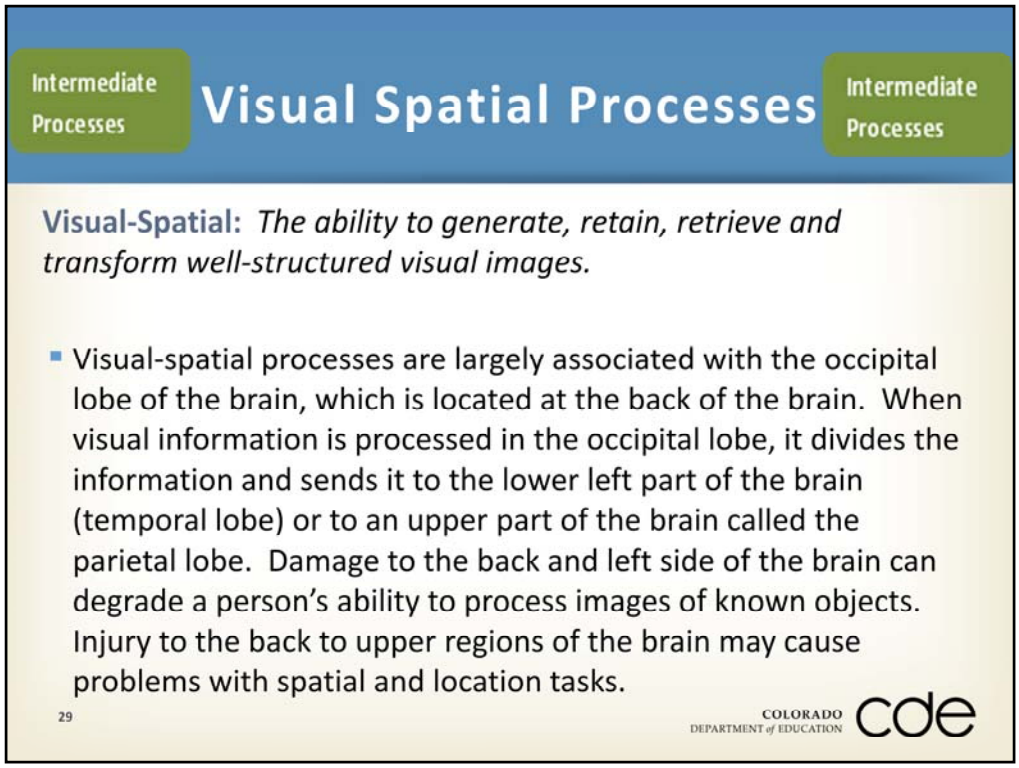


A single hallmark of a brain injury on a child's performance is an "**unevenness**" in abilities across different settings, over time, and across different content areas.

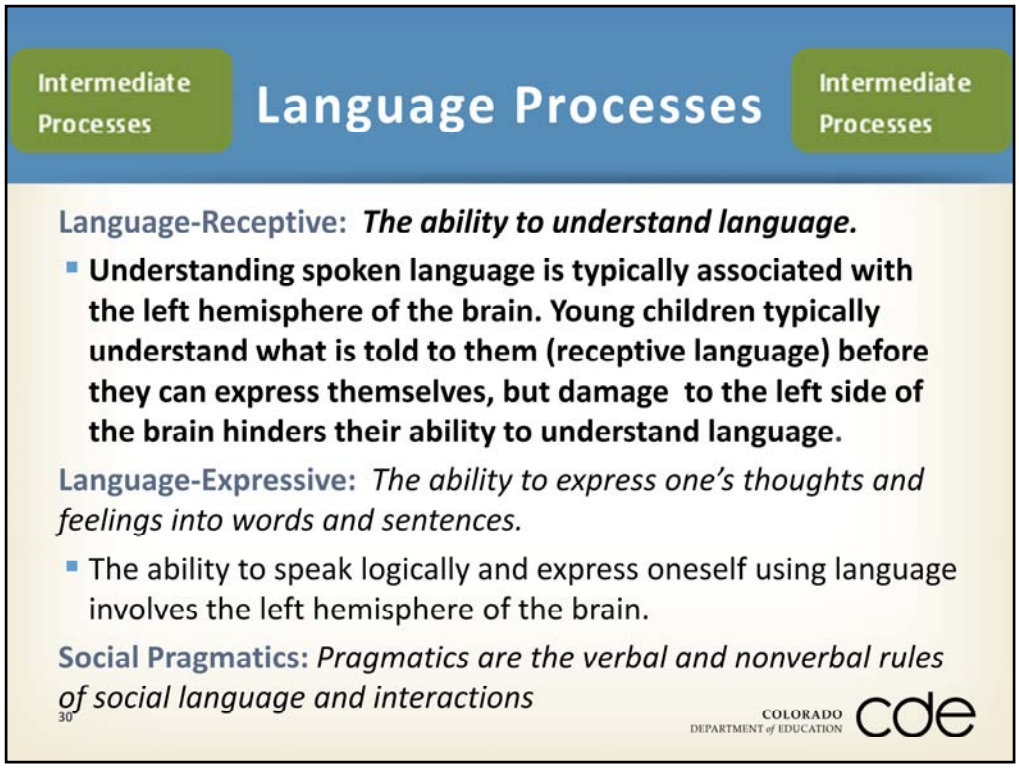
Examples:

1) Across domains – i.e., a 10 year old may have typical abilities of in fine and gross motor areas but have the social-emotional regulation of a 5 yr old.
2) Within domains - High abilities in expressive language and difficulties with receptive language
3) OR a student knows material on Tuesday but cannot retrieve the same information later that same week. (Memory/processing speed/anxiety – many things could be at play here)

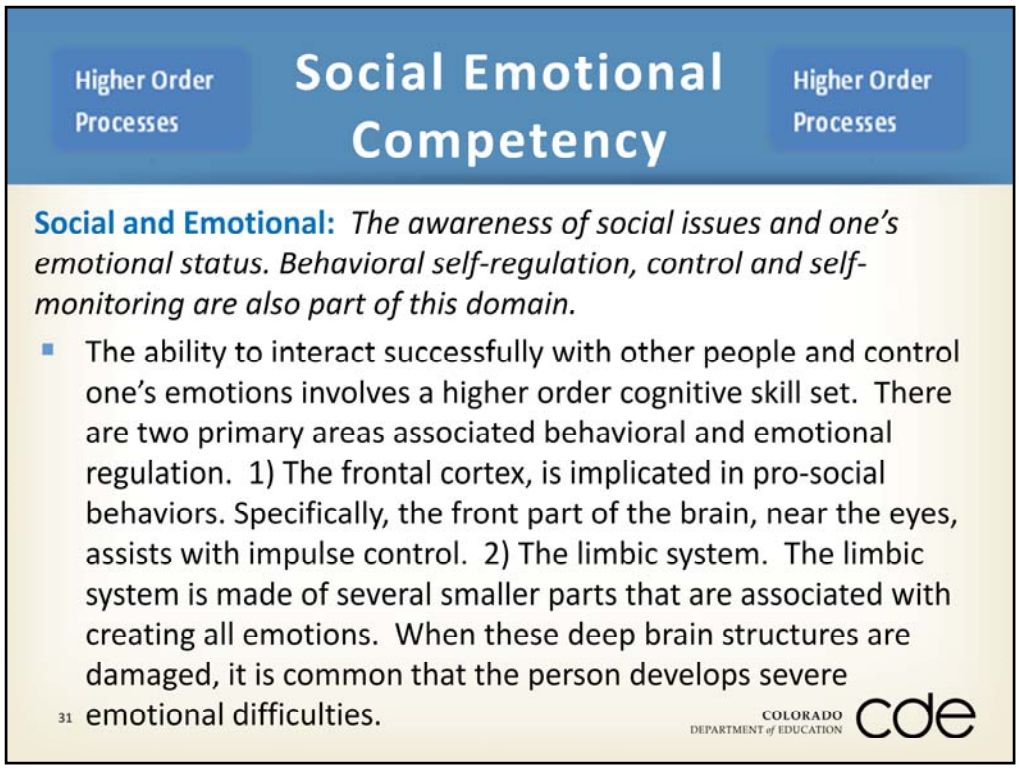
This is often viewed as opposition.



After a brain injury, the visual-spatial abilities are frequently more impacted than verbal and tend to remain at lower levels after recovery.



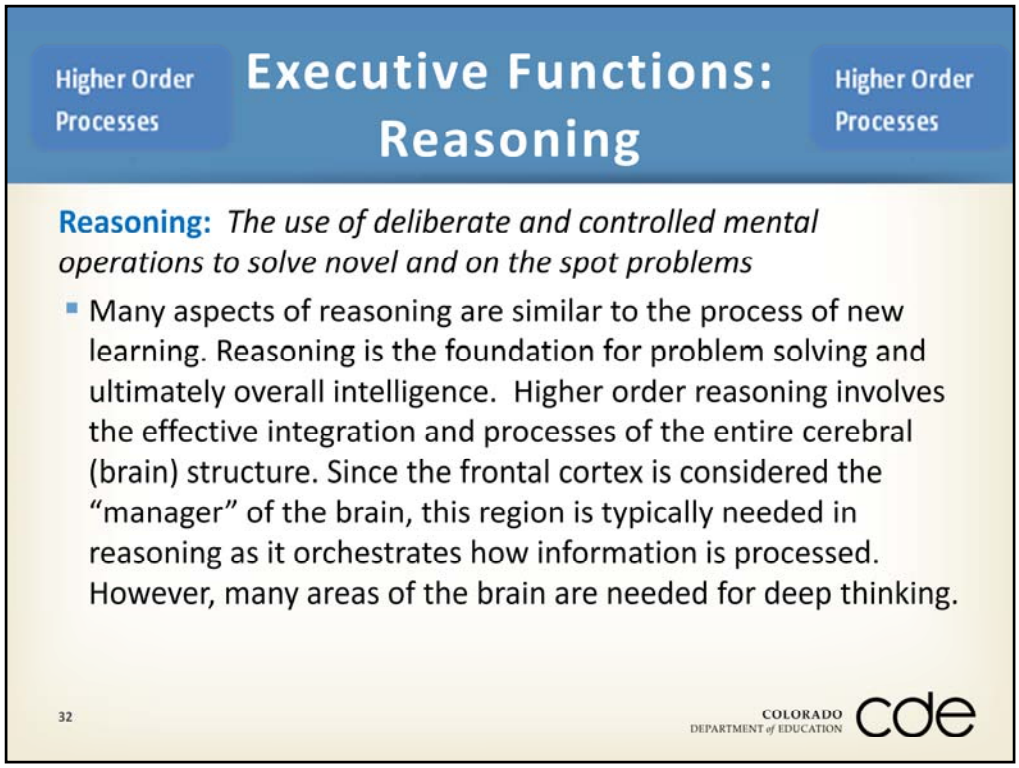
Children's language abilities are still developing and an injury to this area can have a significant impact on their receptive, expressive abilities and/or social pragmatic language as well as their academic performance.



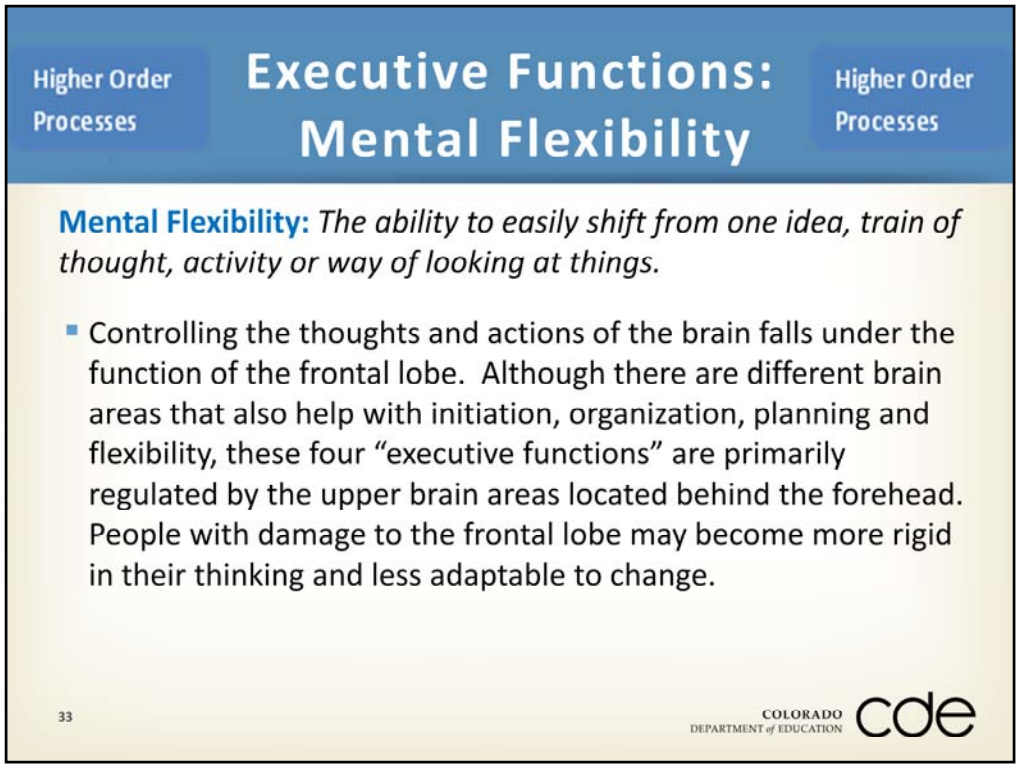
Social emotional competency impacts many aspects of a students life – impulse control, regulation of behaviors and feelings, making and keeping friends, etc.

The negative impacts of this domain may have life altering effects, i.e., juvenile justice system involvement, substance abuse, high risk behaviors, etc.

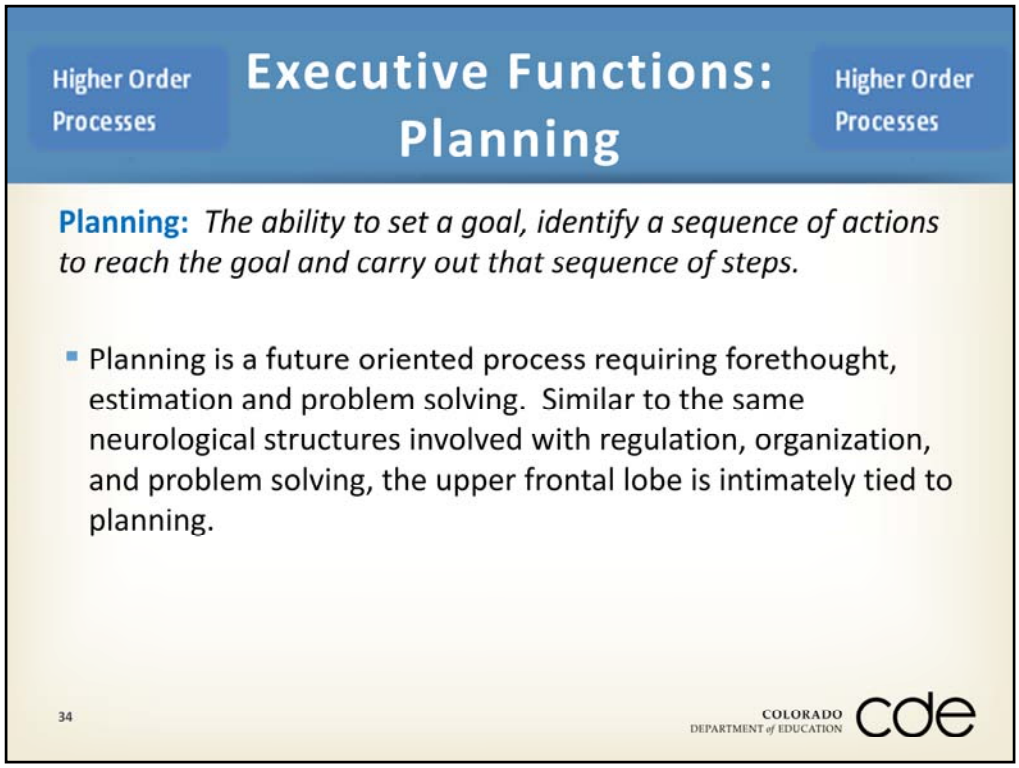
There is an entire chapter dedicated to this domain in the manual (Brain Injury in Children and Youth: A Manual for Educators at: http://www.cde.state.co.us/cdesped/SD-TBI.asp)



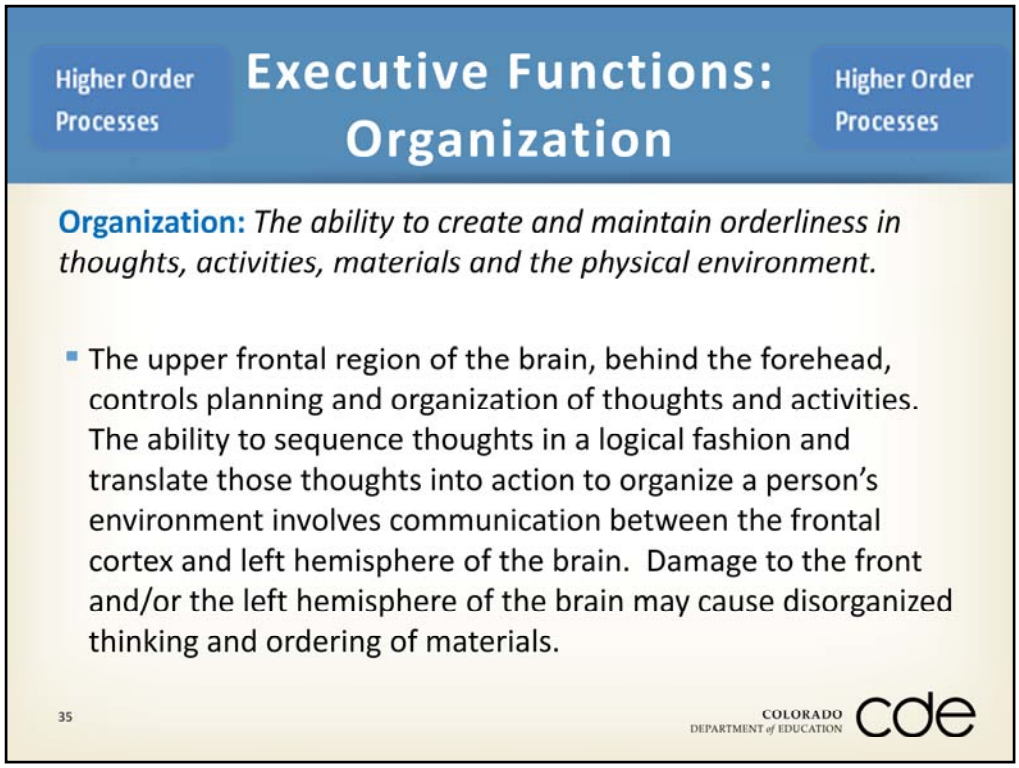
Reasoning involves the consideration of evidence and drawing of conclusions based on the exploration of all possibilities, consideration of positive and negative outcomes and combining knowledge from past experiences (Savage & Wolcott, 1994).



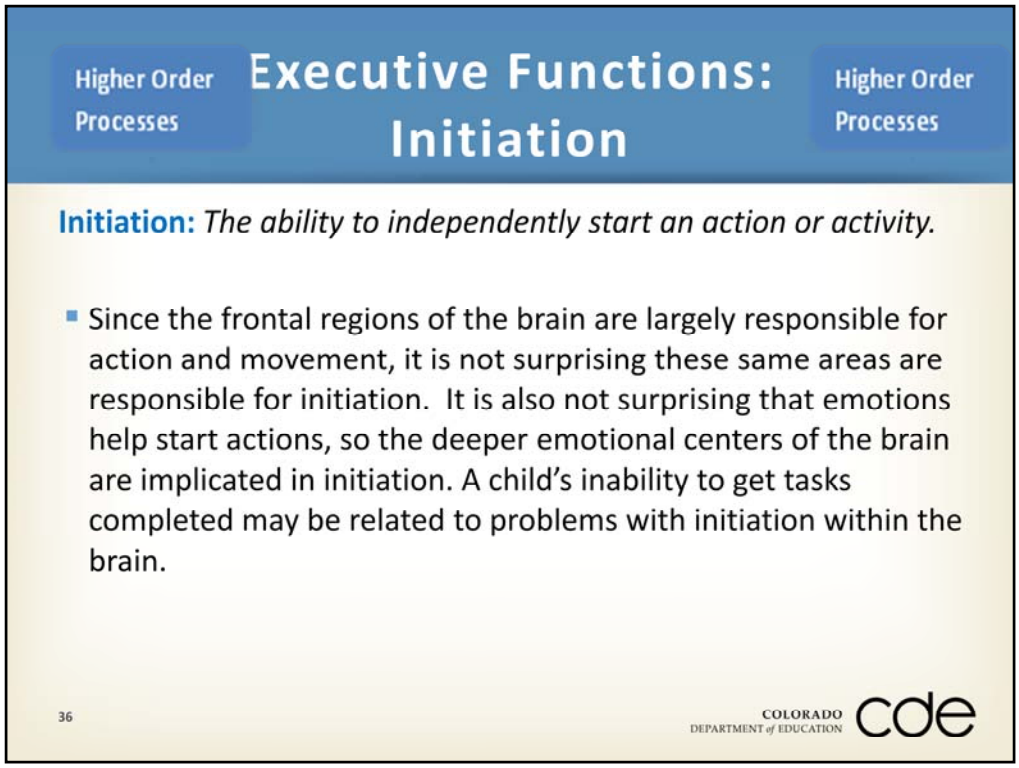
Mental flexibility also involves being able to change the approach to problem solving as the task changes or being able to successfully transition from one task to another.



Students with planning issues may approach tasks impulsively which leads to difficulties in completing each step of the process.



Students who have difficulty paying attention to the most important features of their environment, logically organizing and planning their behavior, and following through often have grave difficulty behaving reasonably in situations which do not provide intense external support and structure.



Initiation issues may appear that the student is uninterested, unmotivated or oppositional when in reality the issue is difficulty knowing how to get started.

Overall Functioning

Cognitive Ability Adaptive Living Skills

Overall Functioning

The child exhibits delays in adaptive living skills, including but not limited to with Activities of Daily Living (ADL).

Some Examples:

- Personal hygiene and grooming
- Housework
- Managing money
- Use of telephone or other form of communication
- Community mobility
- Care of pets
- Meal preparation and cleanup
- Safety procedures and emergency responses

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Overall Functioning

Overall Functioning

Cognitive Ability
Achievement – Academic Skills

- The child exhibits delays in academic skills, including but not limited to reading, writing, and math delays that cannot be explained by any other disability. They may also demonstrate an extremely uneven pattern in cognitive and achievement testing, work production and academic growth.

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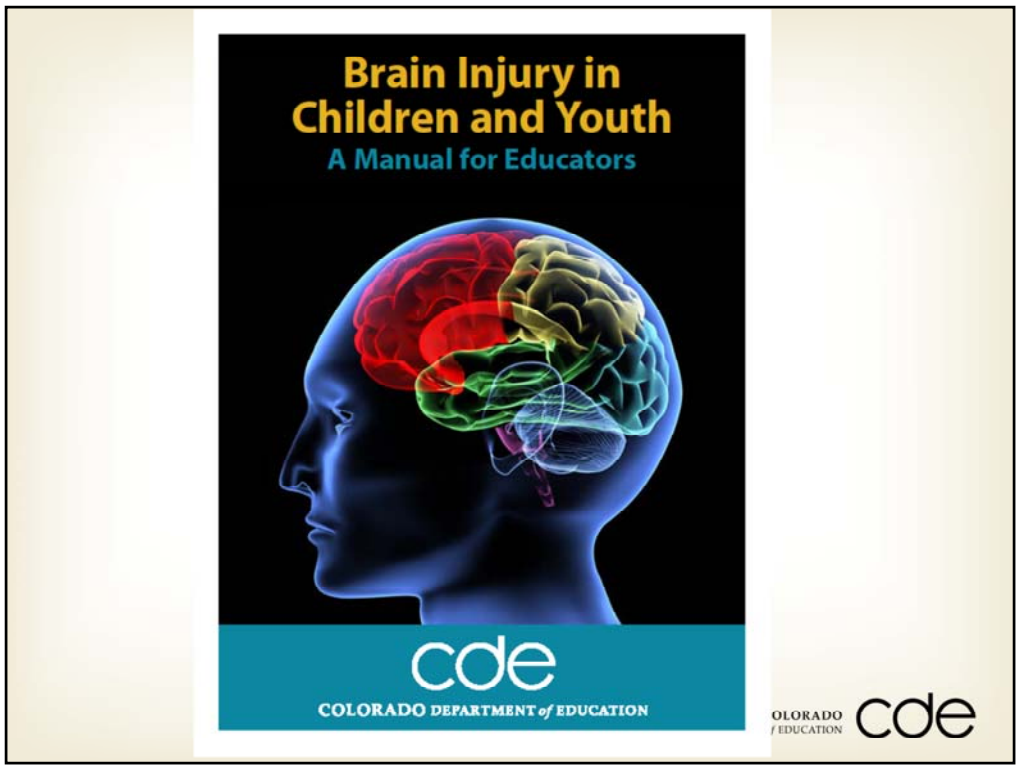
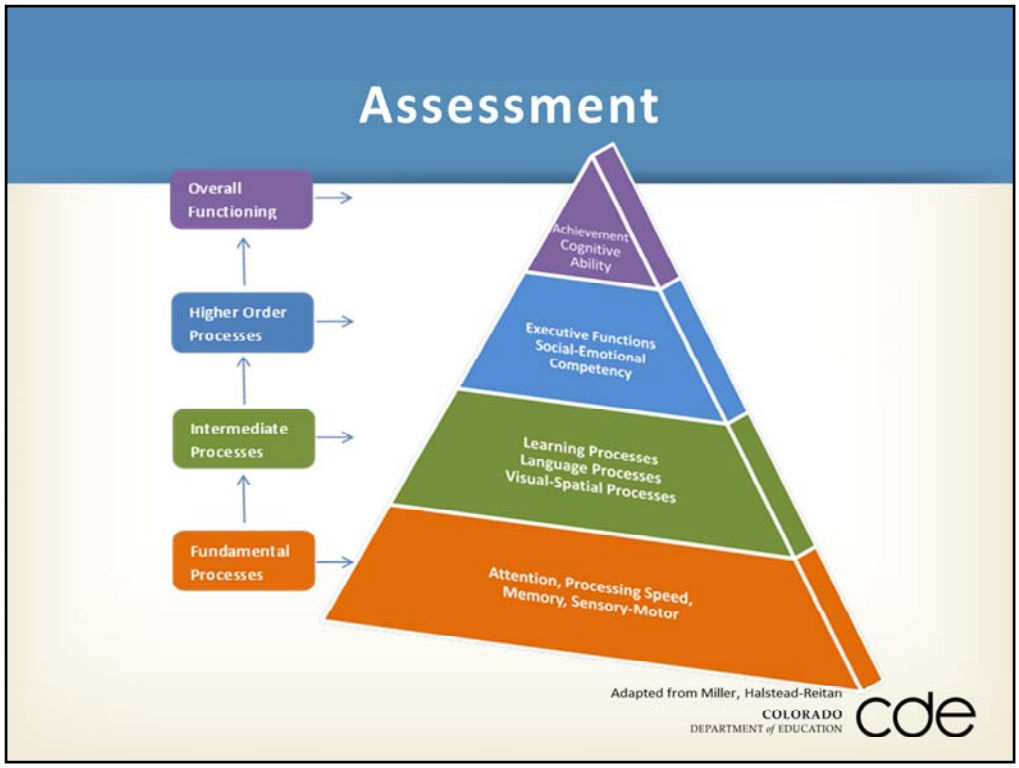


Resource: Brain Injury in Children and Youth: A Manual for Educators

- Downloadable from the CDE website at: http://www.cde.state.co.us/cdesped/SD-TBI.asp
- And at www.cokidswithbraininjury.com


Assessment
Overall Functioning
Higher Order Processes
Intermediate Processes
Fundamental Processes
Achievement
Cognitive Ability
Executive Functions
Social-Emotional Competency
Learning Processes
Language Processes
Visual-Spatial Processes
Attention, Processing Speed, Memory, Sensory-Motor
Adapted from Miller, Halstead-Reitan
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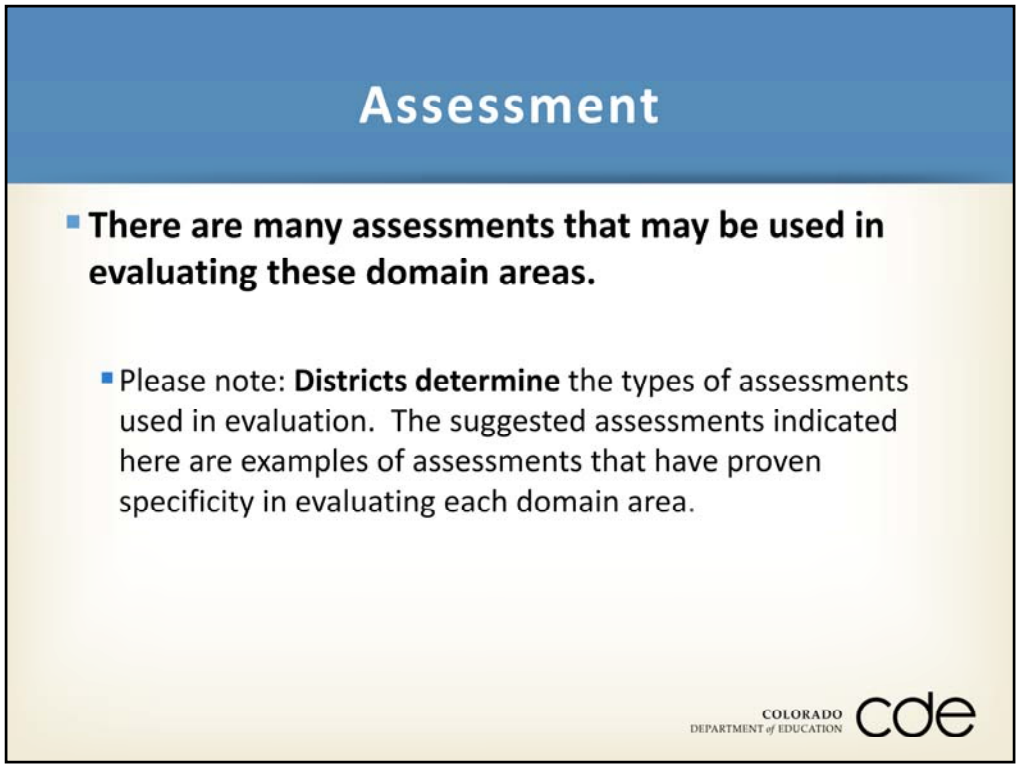
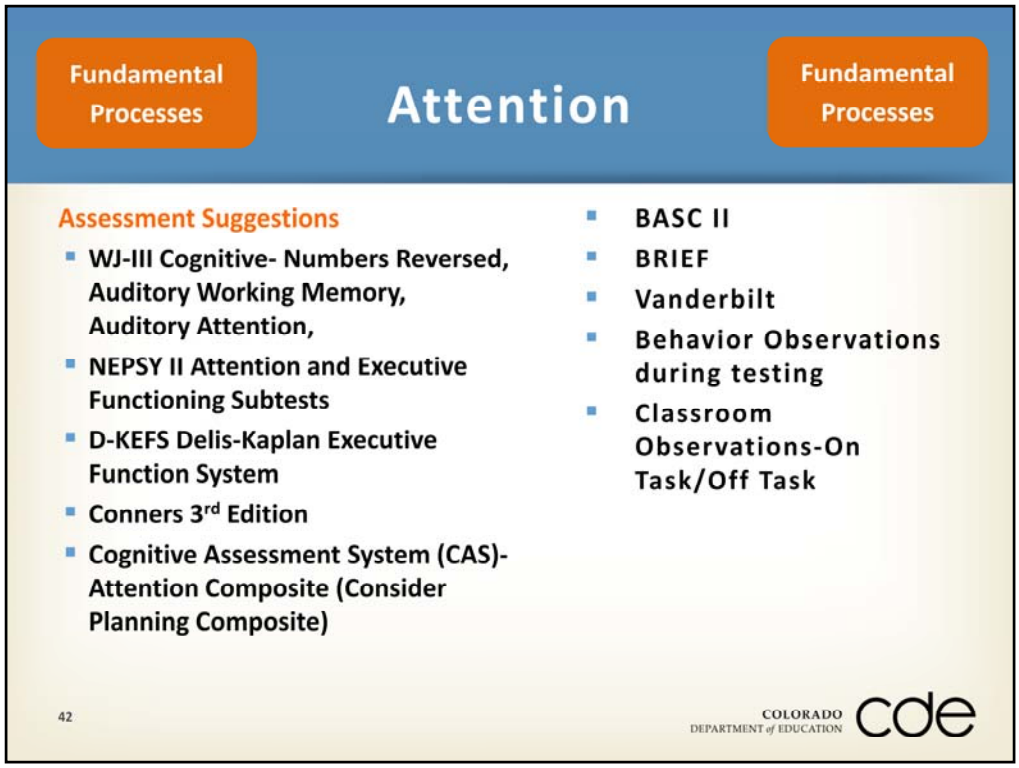


Districts decide what assessments are used in your district

- These have been proven for specificity in evaluation of the domain area.
- All examples here are able to be given by school personnel.


Fundamental Processes
Attention
Fundamental Processes
Assessment Suggestions
WJ-III Cognitive- Numbers Reversed, Auditory Working Memory, Auditory Attention,
NEPSY II Attention and Executive Functioning Subtests
D-KEFS Delis-Kaplan Executive Function System
Conners 3rd Edition
Cognitive Assessment System (CAS)- Attention Composite (Consider Planning Composite)
BASC II
BRIEF
Vanderbilt
Behavior Observations during testing
Classroom Observations-On Task/Off Task
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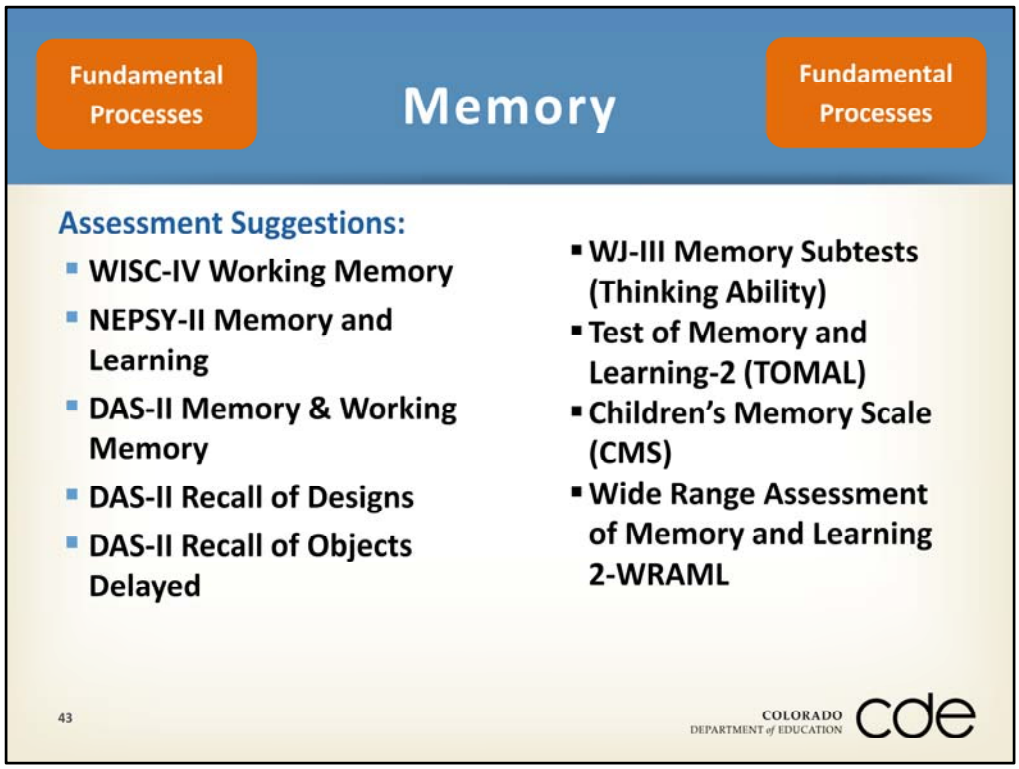
Fundamental Processes
Memory
Fundamental Processes
Assessment Suggestions:
WISC-IV Working Memory
NEPSY-II Memory and Learning
DAS-II Memory & Working Memory
DAS-II Recall of Designs
DAS-II Recall of Objects Delayed
WJ-III Memory Subtests (Thinking Ability)
Test of Memory and Learning-2 (TOMAL)
Children's Memory Scale (CMS)
Wide Range Assessment of Memory and Learning 2-WRAML
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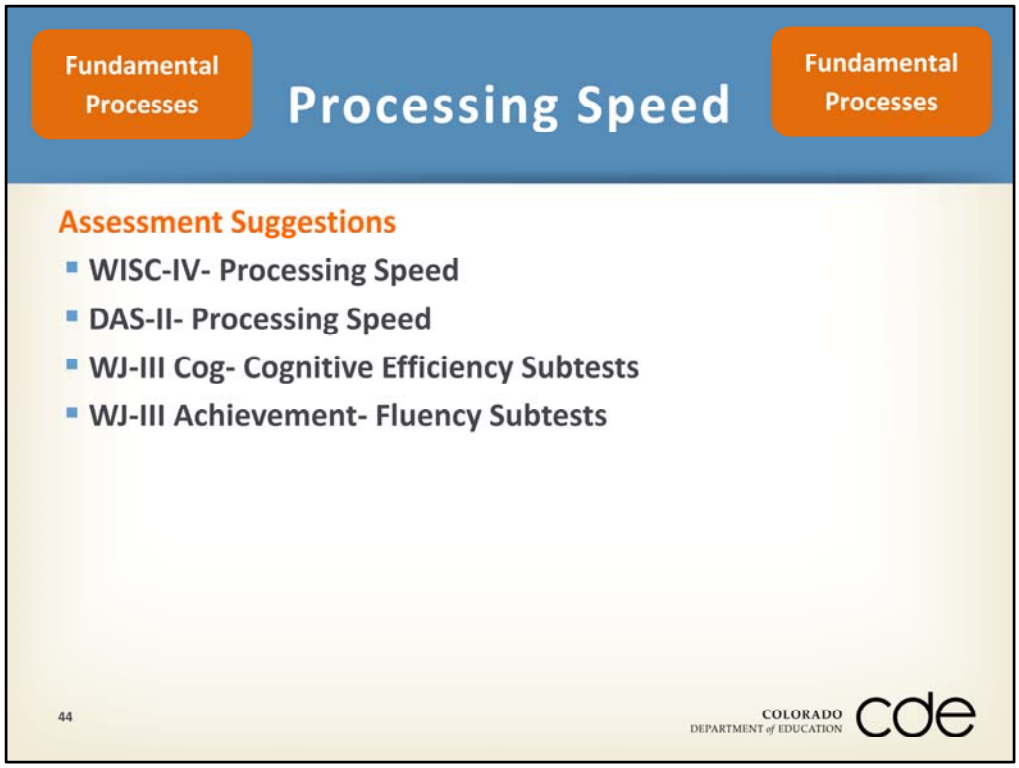
Fundamental Processes
Processing Speed
Fundamental Processes
Assessment Suggestions
WISC-IV- Processing Speed
DAS-II- Processing Speed
WJ-III Cog- Cognitive Efficiency Subtests
WJ-III Achievement- Fluency Subtests
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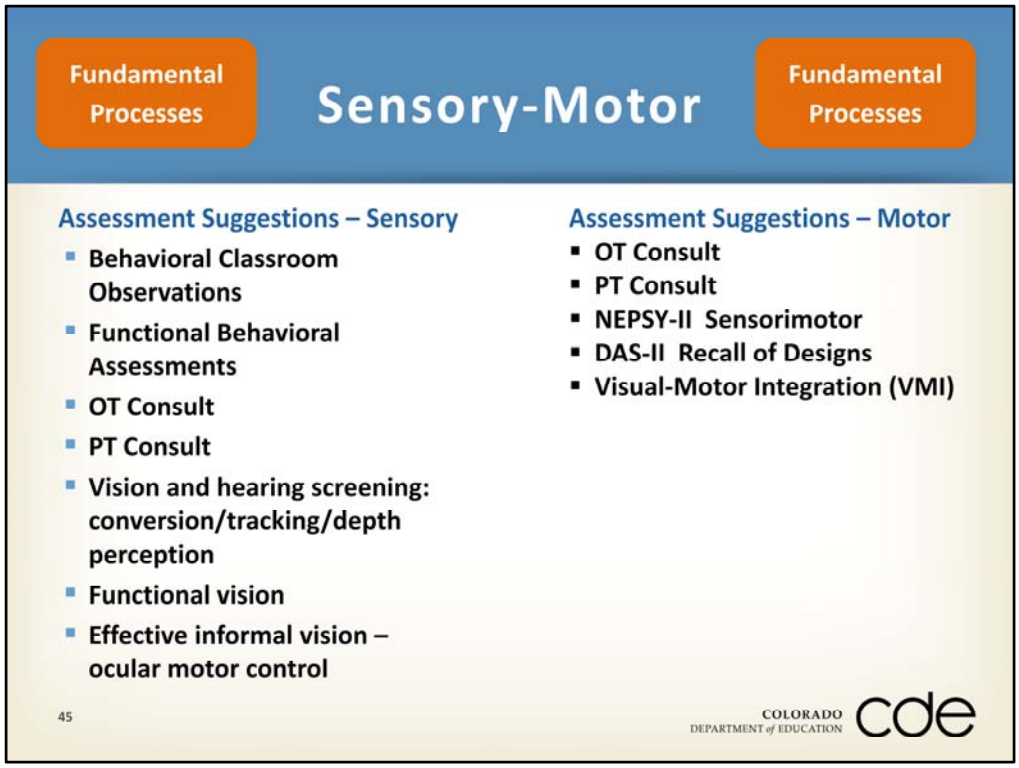
Fundamental Processes
Sensory-Motor
Fundamental Processes
Assessment Suggestions – Sensory
Behavioral Classroom Observations
Functional Behavioral Assessments
OT Consult
PT Consult
Vision and hearing screening: conversion/tracking/depth perception
Functional vision
Effective informal vision – ocular motor control
Assessment Suggestions – Motor
OT Consult
PT Consult
NEPSY-II Sensorimotor
DAS-II Recall of Designs
Visual-Motor Integration (VMI)
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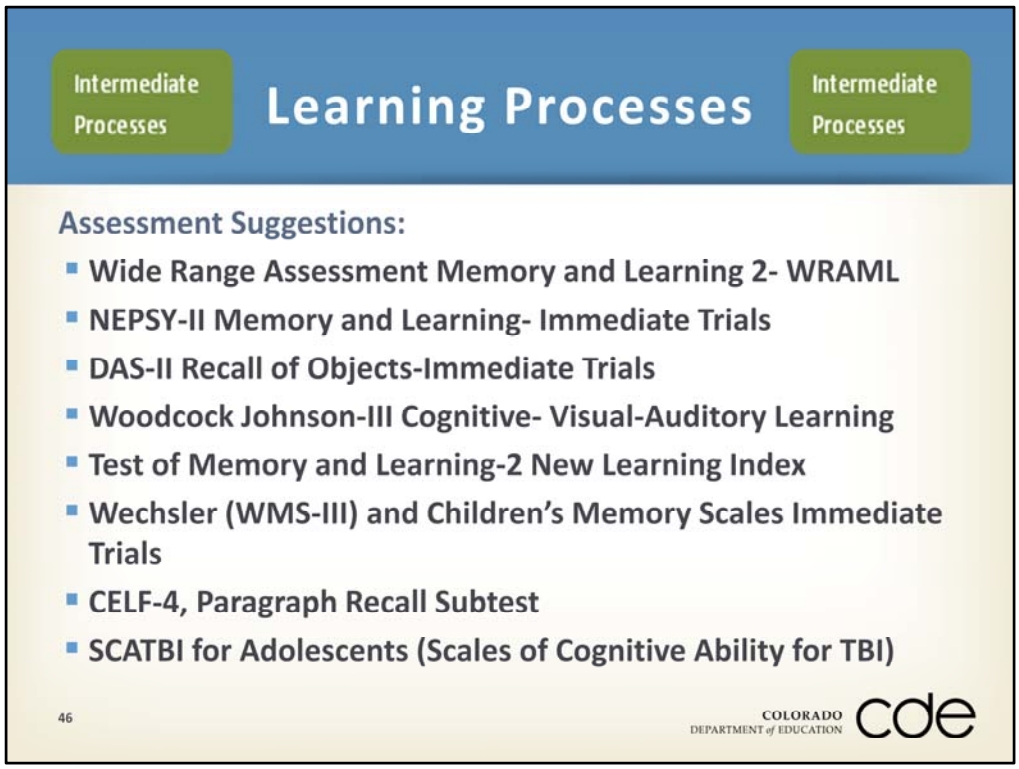
Intermediate Processes
Learning Processes
Intermediate Processes
Assessment Suggestions:
Wide Range Assessment Memory and Learning 2- WRAML
NEPSY-II Memory and Learning- Immediate Trials
DAS-II Recall of Objects-Immediate Trials
Woodcock Johnson-III Cognitive- Visual-Auditory Learning
Test of Memory and Learning-2 New Learning Index
Wechsler (WMS-III) and Children's Memory Scales Immediate Trials
CELF-4, Paragraph Recall Subtest
SCATBI for Adolescents (Scales of Cognitive Ability for TBI)
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Intermediate Processes

Visual-Spatial Processes

Intermediate Processes

Assessment Suggestions:

- DAS-II -Spatial Subtests
- WISC-IV Perceptual Reasoning Subtests
- WJ-III Cognitive- Spatial Relations, Picture Recognition
- NEPSY-II-Visualspatial Processing
- K-ABC 2 NonVerbal Scale
- Leiter-R
- Visual Motor Integration (VMI)

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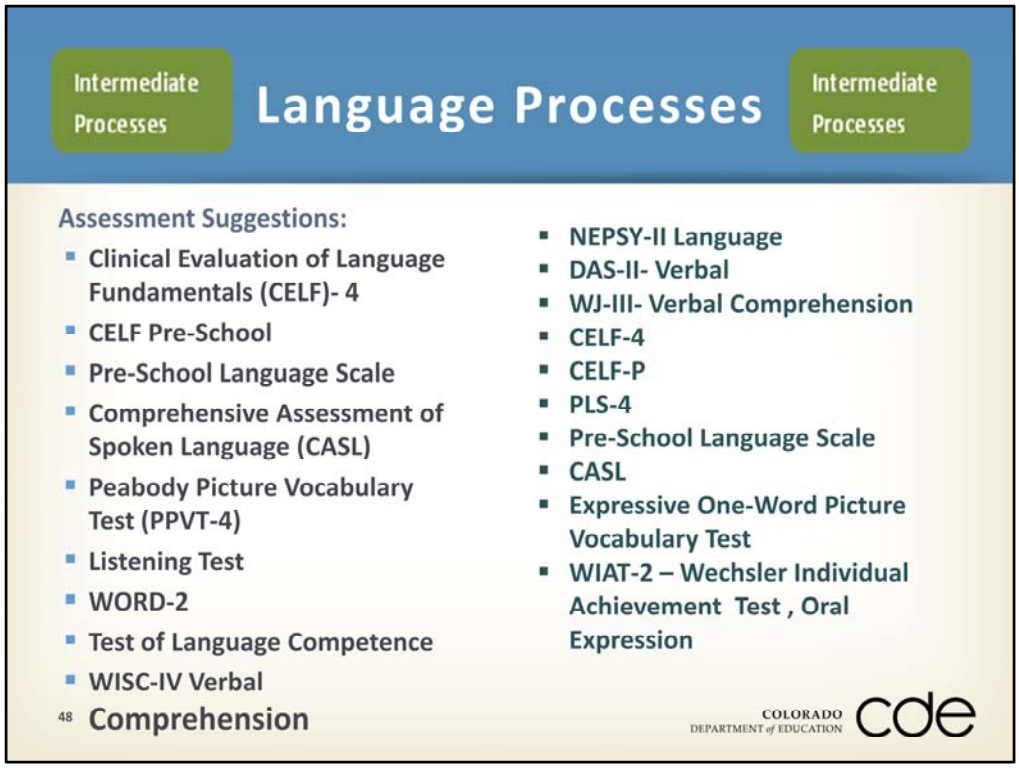
Intermediate Processes
Language Processes
Intermediate Processes
Assessment Suggestions:
Clinical Evaluation of Language Fundamentals (CELF)- 4
CELF Pre-School
Pre-School Language Scale
Comprehensive Assessment of Spoken Language (CASL)
Peabody Picture Vocabulary Test (PPVT-4)
Listening Test
WORD-2
Test of Language Competence
WISC-IV Verbal
NEPSY-II Language
DAS-II- Verbal
WJ-III- Verbal Comprehension
CELF-4
CELF-P
PLS-4
Pre-School Language Scale
CASL
Expressive One-Word Picture Vocabulary Test
WIAT-2 – Wechsler Individual Achievement Test , Oral Expression
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Comprehension
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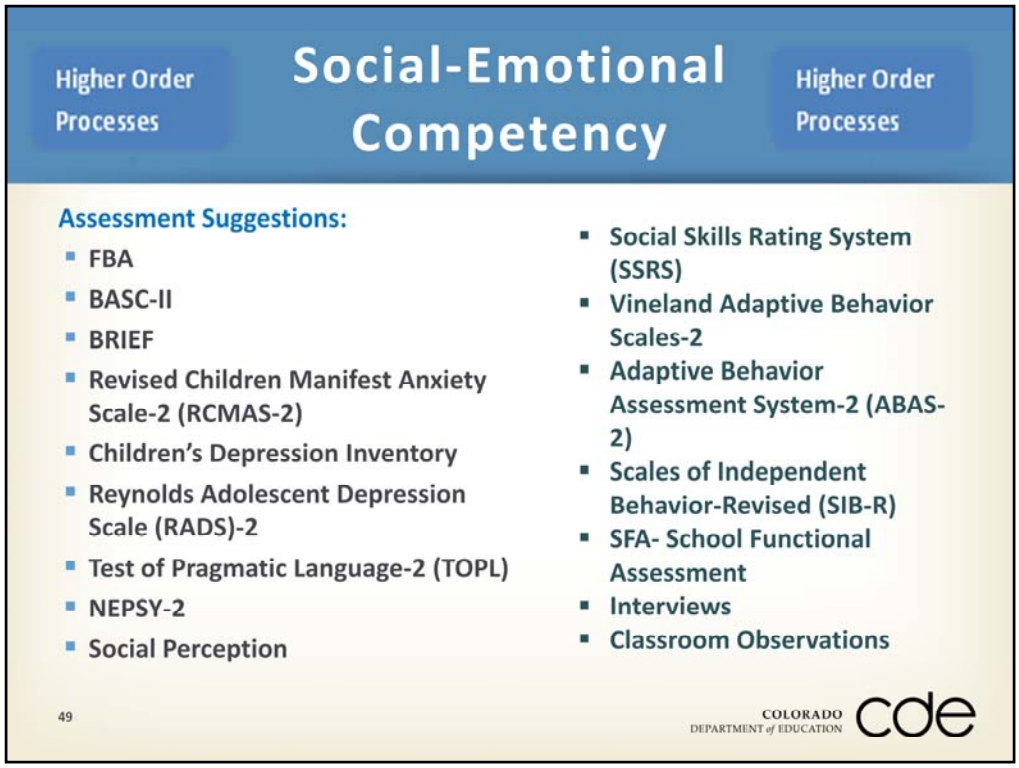

There are formal tests but this area is also assessed through teacher observation or functional observations

Higher Order Processes

Executive Functions: Reasoning

Higher Order Processes

Assessment Suggestions:

- DAS-II
- Non-Verbal
- WISC-IV Perceptual Reasoning Subtests
- K-ABC 2 Nonverbal Scale
- CAS Simultaneous Processing Composite
- Test of Adolescent Problem-Solving (TOPS)
- WJ-III, Verbal Analogies and Analyses-Synthesis

Higher Order Processes

Executive Function: Mental Flexibility

Higher Order Processes

Assessment Suggestions:

- BRIEF
- NEPSY II- Attention and Executive Function
- WJ-III Cognitive- Concept Formation
- D-KEFS
- Assessment Observations
- Parent/teacher interview

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Higher Order Processes

Executive Function: Planning

Higher Order Processes

Assessment Suggestions:

- NEPSY II-Attention and Executive Function
- D-KEFS
- WJ-III Cog- planning subtest
- CAS- Planning Composite
- BRIEF
- Assessment Observations
- Parent/teacher interviews

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Higher Order Processes

Executive Function: Organization

Higher Order Processes

Assessment Suggestions:

- BRIEF
- Parent/teacher interview
- Observations

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Higher Order Processes

Executive Function: Initiation

Higher Order Processes

Assessment Suggestions:

- BRIEF
- Classroom Observations
- Assessment Observations

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Overall Functioning

Cognitive Ability: ADLs

Overall Functioning

Assessment Suggestions:

- SIB-R
- Vineland Adaptive Behavior Scales
- ABAS II
- Functional Observation

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Overall Functioning

Cognitive Ability: Achievement

Overall Functioning

Assessment Suggestions:

- All Achievement Tests
- Classroom Function
- Teacher report, Report cards
- Progress Monitoring
- Formal Achievement Tests i.e. ACT, PSAT, SAT, TCAP

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To Be Eligible as TBI, the Child Must Meet All Three Conditions

1. Must have the presence of a traumatic brain injury, as documented by a medical report or credible history.
2. Educational performance must be affected adversely by the traumatic brain injury.
3. The traumatic brain injury must create a need for specially designed instruction.

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TBI Resources

Traumatic Brain Injury Networking Team-Resource Network ("CO Kids Website")
www.COKidswithbraininjury.com

CDE-Brain Injury in Children and Youth: A Manual for Educators
www.cde.state.co.us/cdesped/SD-TBI.asp

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Thank You!

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