

## ANNEX A – Brief description of the tests and scales that compose the CEF-B

Domain	Test	Type	Description
<b>Inhibitory Control</b>	Stroop	Modified	This version is divided in three subtasks: 'Naming', 'Reading' and 'Interference'. Three colors are used (blue, red and green) and before the administration of each part, a training phase is performed composed by 10 items in order to verify the children's understanding of the task. The test proposes 100 items per subtask, divided into 10 lines of 10 stimuli on a white paper in landscape format; the child is instructed to complete each subtask as quickly as possible (timed event) and by committing the least possible mistakes.
	Tapping	New	It was designed to preferentially evaluate the inhibitory abilities of a predominant or automatic motor response, including a Go/No-Go component and a conflictual conditioning component. After a first phase of "simple conditioning" where the child must repeat the motor action produced by the examiner (tapping once or twice with the index on the table), the child must inhibit this pattern of automated response by no longer reacting when the examiner taps twice ("Go/No-Go" component). In a third and final phase (called "Conflict"), the conditioning becomes antagonistic in the sense that the child must be able to do the opposite of the initial phase (typing twice when the examiner taps once and vice versa), while incorporating a new no-go condition (do nothing when the examiner is tapping with two fingers). The last and most difficult condition therefore imposes both the inhibition of the previously learned response pattern and the automatic "echo" response, and the adaptation to a new no-go component. Each of these three conditions includes a series of 30 items, with sequences varying randomly from one condition to another, to avoid any form of learning. The event is timed and the child's mistakes are recorded at each phase of the event.
	Cross-out Joe	New	It is a test of identification and crossing-out of a visual target among a set of morphologically close distractors, in order to approach the inhibitory control capabilities (inhibition of distractors, selective attention) and sustained attention. The child must cross-out the Joe character from a set of other characters. To verify the understanding of the task, the child performs a training phase with the examiner. The material of the test is composed by two white sheets in A3 format and portrait orientation, on which two series (A and B) of 240 items (16 lines of 15 characters) are randomly distributed. The target (Joe) appears unpredictably for the child, once every five characters, adding up to a total of 48 identifiable targets among 192 distractors (per sheet). This is a timed task in which the child is instructed to work as quickly as possible but also as accurately as possible.
<b>Working Memory</b>	Visuospatial updating	New	It evaluates the updating dimension of the visuospatial capacity of working memory. It involves mimicking a researcher as they tap a sequence of up to 10 identical spatially separated blocks. The sequence comprises sets of variable length, from which they must then sequentially recall a specific number of recent elements. By varying the amount of information to be updated (influenced by the length of the list), it is possible to control the request for processing in WM (the processing load - or executive

<b>Flexibility</b>			load - increasing when the number of updates to perform increases). By varying the number of items to recall, it is also possible to control the storage demand in WM. The task consists of two steps: 1- 'visuospatial span' (baseline): which aims to globally evaluate the ability to remember the locations touched by the examiner (visual memory) and; 2- 'update': in which the last three or four items of a given sequence must be recalled.
	Verbal updating	New	Participants are presented with sets of letters of variable length, from which they must then sequentially recall a specific number of recent elements. By varying the amount of information to be updated (influenced by the length of the list), it is possible to control the request for processing in WM (the processing load - or executive load - increasing when the number of updates to perform increases). As with the visuospatial updating test, this task consists of two steps: 1 – 'verbal span' (baseline): which aims to globally evaluate the ability to remember the letters said by the examiner and; 2- 'update': in which the last three letters of a given sequence must be recalled.
	Double Task	New	It aims to evaluate the central executive component of working memory, as well as memory span, in other cognitive tasks. For this purpose, four subtasks are performed with a duration of one minute and 30 seconds: 1 - digits span (baseline): establishment of 'span' (baseline), which corresponds to the number of digits in the last series where there have been at least two successes, that is, for the extension before the interruption; 2 - span task (simple condition): after the establishment of the baseline 'span', sequences of the same length are presented for one minute and 30 seconds; 3- cancellation task: the child is presented with a sheet containing disorderly arranged clown heads connected by a line. For one minute and 30 seconds the child should draw an X on the clown heads they find on the sheet, following the line; 4- double condition: at this stage, the child is asked to perform the two previous activities simultaneously: make an X on all the clowns' heads and, at the same time, repeat the series of digits presented by the psychologist according to the baseline established for the "Span" task, for one minute and 30 seconds.
	Trail Making Test (TMT)	Modified	This activity is an adaptation of the TMT, which aims to evaluate the ability to alternate the attention focus between sets of stimuli. Unlike the original version, this task consists of three subtasks: subtask 'A Numbers', subtask 'A Letters' and subtask 'B Numbers and Letters'. In the first subtask ('A Numbers') the child is asked to connect numbers (1-20) in ascending order. In subtask 2 ('A Letters') the child must connect the letters in alphabetical order (A-T) and finally, in subtask 3 ('B Numbers and Letters') the child must connect letters and numbers alternately while following the alphabetical order and ascending numerical order.
	New Card Sorting Test	Modified	This task requires that children match a series of 48 response cards with any of four target cards (which are equal to the Wisconsin Card Sorting Test - WCST). Each response card can be matched for color, shape, or number, and the child has to guess the sorting principle only on the basis of examiner feedback ("yes" or "no"). After six correct responses, the sorting principle is changed without prior warning. The final score includes the number of correct responses. In this version, the child is told the three categories before the beginning of the test.

<b>Planning</b>	Brixton Junior	New	This task evaluates the abstraction and deduction capacities of operating rules, which require cognitive flexibility. The child needs to deduce the rules of movement of a frog that moves on several water lilies around a pond according to several logical displacement rules, and to adapt to the actions of the frog, which changes the rule of movement without warning. It is composed by 70 successive cards and in each card there are 10 water lilies (in the middle of a pond, drawn on an A4 sheet in landscape format), numbered from 1 to 10. From one card to another, the frog changes position according to a "logical" movement rule: the child must therefore anticipate the position of the frog on the next map. Ten rules of displacement are to be discovered by the end of the test, which are not based on mathematical reasoning. The changing of the rule is unpredictable and occurs in a pseudo-random manner every 4 to 9 attempts.
	Mazes	New	This test consists of 8 mazes of increasing difficulty presented on A4 sheets (mazes 1 to 7) or on A3 sheets (maze 8). For each maze, a small dinosaur indicates the starting point, a dinosaur that will have to be lead out of the maze. The exit is marked with a "Exit" flag. The test requires the subjects to draw, with a pencil, the path leading out from the starting point to the exit point.
	Scripts	New	The Scripts task is composed of a series of sequential everyday life actions. These schemes form conceptual units that allow the individual to be prepared to think and act in specific contexts. The scripts proposed in this task are: 1 - Take a shower; 2 - Prepare the backpack to go to school; 3 - Do the shopping at the supermarket. For each script there are actions that the child must put in order to build a coherent script according to the given title. Among the cards provided, two of the envelopes (Envelope 1 - Take a Shower and Envelope 2 - Prepare School Bag) contain actions considered as intrusive, i.e. actions that are not related to the script. The child must justify the order of the arrangements, including the intrusions, explaining his or her behavior in relation to them. It is important to note that at no circumstances is the child informed that there are intrusions in the scripts, and whenever the child questions these actions, the examiner answers without giving the child the impression that he or she has the right to reject or accept the intrusion.
	Rey Osterrieth Figure – Formulation and Execution condition	Extended	In this version, in addition to the traditional copy of the figure – formulation condition –we added the realization of execution condition. In this second part children progressively reproduced the figure on the basis of successive and progressive cues in which each new group of elements was represented in a distinct color. Children were not informed that they were creating a larger figure from its components. Each cue was presented on a new, separate sheet and children were systematically asked to continue their drawings by including the new colored group of elements. The order of these cues was (1) central rectangle; (2) central diagonals; (3) two major horizontal and vertical lines and upper and major right triangles; (4) diamond at the end of the major triangle, vertical line in major right triangle, lower left square and lower cross attached to vertical midline below rectangle, and upper left cross outside of rectangle; and (5) minor

			rectangle with diagonals, horizontal lines in upper left corner of central rectangle, vertical line in upper right corner of central rectangle, upper right circle, and lower right oblique lines.
<b>Scales of Interest and Success</b>	Interest scale	New	It evaluates the child's interest in each test proposed in the protocol. The scale corresponds to a horizontal strip containing five faces, with expressions varying from 'most cheerful' to 'most sad', and must be filled by the child and by the examiner (self- and hetero-evaluation, respectively).
	Success scale	New	It evaluates the success achieved by the child in each task, being applied soon after the 'Interest Scale'. The child is required to move a pointer (cyclist) on a mountain with five sections, where the top means good performance and the bottom means poor performance, to indicate their success in the task. It should also be completed by the child and the examiner (self- and hetero-evaluation, respectively).