

Functional Gaze Control

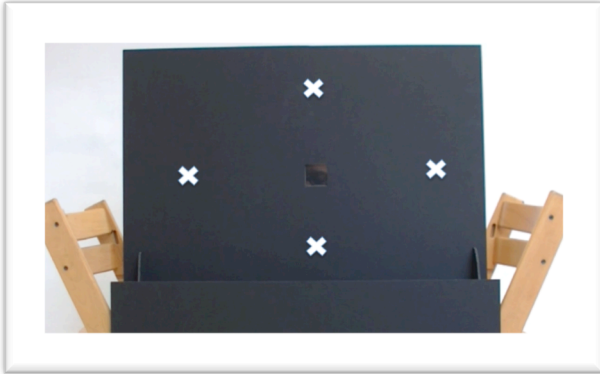
Guidance for running procedures



Gaze Fixation

Please view the online video tutorial before proceeding with assessment and scoring.

This assessment simply looks at the ability to fix gaze on a stationary target.



The reliability of your assessment will increase with the number of trials you administer. We recommend that where possible targets are presented at least 4 times in each position (left, right, top, bottom), making a total of total of 16 trials.

When referring to the presentation of targets on the left and right of the board, we mean left and right from the child's perspective. Please also note that for all assessment activities the child should be positioned centrally and 1 metre from the board.

Use the score sheet provided to record:

- Whether or not you observed the child fix their gaze on the target when it was revealed. An example is shown below, and blank score sheets are provided for all activities.

If you did observe the child fix their gaze on the target, indicate whether or not:

- The child did so **immediately** after the target was revealed, or if gaze fixation was **delayed**, i.e. taking a couple of seconds or more. After six seconds without fixation observed you can mark it as absent.
- Gaze was **held** on the target (for about 2 seconds or more)
- Gaze on the target appeared **fleeting** (less than 2 seconds)

Then add the total for each column to give a total for the number of fixations observed, the total number that occurred immediately or were delayed, and the total number of fixations that were held on the target or were fleeting.

Trail	Position	Fixed gaze	Time to fix		Fixation held	
		Yes / No	Immediate	Delayed	Held (about 2 seconds)	Fleeting (less than 2 seconds)
1	Left	x				
2	Right	✓		✓	✓	
3	Bottom	✓		✓	✓	
4	Top	x				
5	Left	✓	✓		✓	
6	Top	✓		✓		✓
7	Right	✓		✓	✓	
8	Bottom	✓		✓	✓	
9	Right	✓		✓	✓	
10	Top	✓		✓		✓
11	Bottom	✓		✓	✓	
12	Left	✓		✓	✓	
13	Right	✓		✓	✓	
14	Left	✓		✓	✓	
15	Bottom	✓		✓	✓	
16	Top	✓		✓	✓	
	TOTAL	14	1	13	12	2

This work is supported by
Sparks and the Rooney
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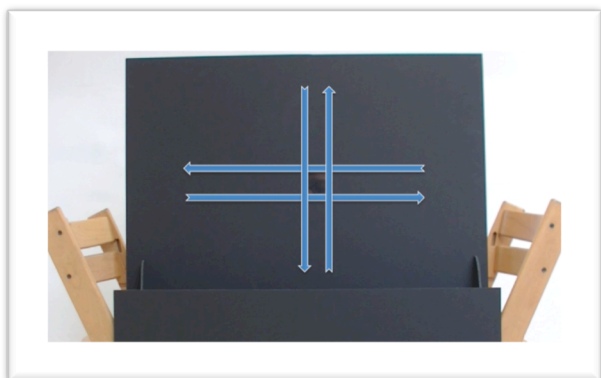
For children's health
www.sparks.org.uk

Tracking



Please view the online video tutorial before proceeding with assessment and scoring.

This activity explores children’s ability to follow a moving target with their eyes. This may involve moving their head as required.



The reliability of your assessment will increase with the number of trials you administer.

Where possible, we recommend that, moving targets are presented at least 4 times in each direction (left-right, right-left, top-bottom, bottom-top), making a total of total of 16 trials, and that the child is positioned 1 metre from the board.

Use the score sheet provided to record:

- Whether or not you observed the child using their eyes to follow the moving target.

If you did observe the child using their eyes to follow the moving target, indicate:

- Whether s/he was able to follow the target from the start to the very end of its journey when it is stationary. (i.e. **full tracking**).
- Whether s/he followed the moving target for part of its journey (i.e. **partial tracking**). This can occur for a number of reasons including:
 - The child starts well but does not follow the target for the full length of its journey
 - The child loses track of the target as it moves but manages to catch up with it.
 - The child does not fix gaze on the target when it is first presented but notices the target once it has started moving and then is able to follow some or all of the remainder of its journey.

Add the total for each column to give the total number of times the child followed the moving target with their eyes (turning their head etc. as required); the total number of times the child tracked the target for its full journey, and the number of times that tracking was partial. Where partial tracking is observed you may want to make a note of the reasons why.

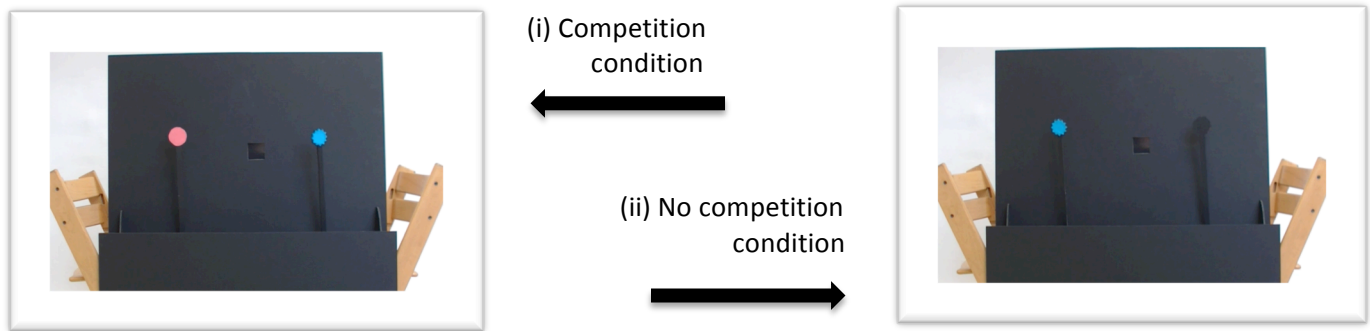
Trail	Direction	Tracking observed	
		Yes / No	Full Partial
1	Left-Right	x	
2	Top-Bottom	✓	✓
3	Right-Left	x	
4	Bottom-Top	✓	✓
5	Top-Bottom	x	
6	Bottom-Top	✓	✓
7	Right-Left	✓	✓
8	Left-Right	x	
9	Right-Left	✓	✓
10	Bottom-Top	x	
11	Left-Right	✓	✓
12	Top-Bottom	✓	✓
13	Left-Right	x	
14	Right-Left	✓	✓
15	Top-Bottom	x	
16	Bottom-Top	x	
	TOTAL	8	2 6

Disengaging and shifting gaze



Please view the online video tutorial before proceeding with assessment and scoring.

This activity explores children’s ability to disengage and shift gaze under two conditions:



(i) Competition condition - This activity requires the child to be able to fix gaze on a target. Once gaze fixation is established on a single target, a second target is presented on either the left or right of the initial target (left or right from the child’s perspective), and the initial target remains visible.

(ii) No competition condition - Once fixation on an initial target is established on the first target, a second target is presented on either the left or right. In the no competition condition the initial target is removed at the same time as the new target is revealed.

The reliability of your assessment will increase with the number of trials you administer.

Where possible, we recommend that the competition and non-competition trials are presented at least 8 times each, making a total of 16 trials. The child should be positioned 1 metre from the board.

Use the score sheet provided to record:

- Whether or not you observed the child to shift gaze to the second target when it appears.

If you did observe the child shift gaze to the second target, indicate:

- Whether s/he did so **immediately** after the target was revealed, or if gaze shift was **delayed**, that is, taking a couple of seconds or more, up to a maximum of six seconds. After six seconds you can mark gaze shift as absent.

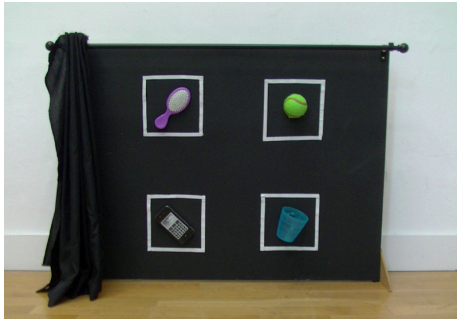
Trail	Condition (competition / no competition)	Second target revealed to the left or right	Gaze shift observed		Time to shift	
			Yes / No	Immediate	Delayed	
1	Competition	Left	x			
2	Non-competition	Left	✓	✓		
3	Non-competition	Right	✓	✓		
4	Competition	Right	x			
5	Non-competition	Left	x			
6	Competition	Right	✓			✓
7	Non-competition	Right	✓	✓		
8	Competition	Left	x			
9	Non-competition	Right	✓	✓		
10	Competition	Left	x			
11	Competition	Right	x			
12	Non-competition	Left	✓	✓		
13	Competition	Left	x			
14	Competition	Right	x			
15	Non-competition	Left	✓	✓		
16	Non-competition	Right	✓	✓		
TOTAL (overall)			8	7		1
TOTAL (competition)			1	0		1
TOTAL (no competition)			7	7		0

Visual search

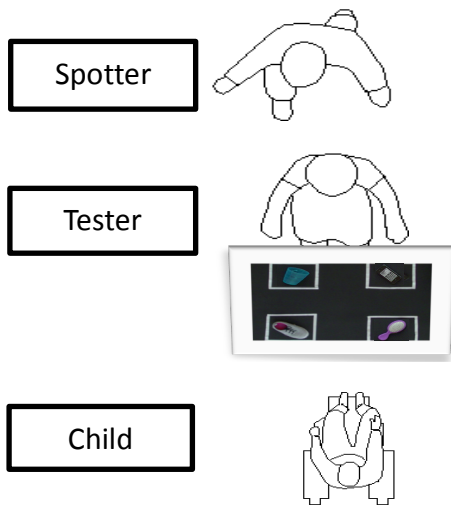


Please view the online video tutorial before proceeding with assessment and scoring.

This activity explores the child's ability to search and selectively attend to targets using their eyes. It requires the child to fix, disengage and shift gaze between four objects.



Four items are presented on a board - one is the target. It is important that the target object is from within the child's known vocabulary. Initially, the items are hidden from the child and then simultaneously revealed. The child is asked to find the target by looking at it. On four occasions the target is missing from the board. This provides the child with an opportunity to make a full visual search of the board for the target. On occasions when the target is missing it is helpful to reassure the child by making a joke of suggesting that the person administering the activity has made a mistake.



When carrying out the activity it is helpful to use a 'blind spotter' approach to record the child's response.

The spotter is positioned behind the board and the tester, who runs the activity. Importantly, the spotter is not aware of whether the target is present or its the position on the board.

The spotter records where the child is looking, that is, whether or not they look at all the items available, a few of them, or none, and whether or not the child indicates the location of the target object. The child should be positioned 1m from the board.

The reliability of your assessment will increase with the number of trials you administer. Where possible, we recommend that you present the target object at least 3 times in each position (top left, top right, bottom left, bottom right), and have the object missing altogether on at least 4 occasions. While you might want to keep the target the same throughout, it is helpful to vary the other items to encourage the child's full engagement with the activity.

Use the score sheet provided to record:

- Whether or not you observed the child using their eyes look at some or all of the objects shown. This may involve moving their head as required.

If you did observe the child looking at the board of objects, indicate:

- Whether s/he completed a full or partial search of the objects.
- Whether s/he identified the target object. While this is not the main objective of running the activity, it is useful to record if and how they did this.

Trail	Position of target	Visual search			Target identified
		No search	Partial	Full	Yes/no
1	Top left		✓		✓
2	Bottom left	x			x
3	Top right		✓		✓
4	Bottom right	x			x
5	Missing		✓		
6	Bottom left		✓		✓
7	Top right	x			x
8	Missing		✓		
9	Top left		✓		✓
10	Bottom right	x			x
11	Missing			✓	
12	Top right		✓		✓
13	Top left		✓		✓
14	Bottom left		✓		✓
15	Missing		✓		
16	Bottom right	x			x
	TOTAL	5	10	1	