Talking Matters

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Perceiving visual input

Visual perception is the ability to make use of what is seen. Receptors in the retina detect changes in light. This gives us information about edges, lines, colour, movement, depth, shape, size, and space between objects and people. However, it is not just seeing but remembering, organising, recognizing and using visual information. There are many different visual perceptual skills, these include:



- Visual discrimination: the ability to discriminate dominant features of objects.
- Visual memory: the ability to recognise something when it reappears.
- Visual spatial relationships: the ability to perceive the position of objects.
- Form constancy: the ability to categorise similar objects with different features.
- Sequential memory: the ability to recognise a sequence of objects when they reappear.
- Visual figure ground: the ability to identify an object from surrounding objects.
- Visual closure: the ability to identify a whole figure when only parts are shown.

Common examples of how poor visual perceptual skills impact on children include, difficulties with reading, writing, memory, visual attention, checking schoolwork, response to the proximity of others, and safe movement in the environment. Children develop these skills through practice. By identifying which skills the child has and doesn't have, therapists can plan more appropriate visual activities.

The child will first need to learn to visually discriminate between objects in a less visually complex background. Features that make a background visually complex include:

- Colour of objects and the background e.g. black and white, red and green, or multicolour
- Number and size of objects
- Distance between objects and overlap
- Thickness of outlines
- Movement in the background
- Contrast of shapes e.g. combinations of straight lines, curves, zigzags and spirals.



Children who experience difficulties with their visual system may find the following strategies helpful life:

- © Prepare the child for the visual challenge by providing them with increased proprioception (through deep pressure or movement activities) to ensure they are calm and ready to work.
- © Begin activities with fewer colours and higher contrast between colours (black and white), fewer objects, more distance between objects, thicker outlines, larger size of objects, no movement, and higher contrast of shapes.
- ② As the child learns to master finding objects more quickly, increase the visual complexity of the background. Work towards multiple colours and less contrast between colours (shades of green), more objects, overlap between objects, thinner/dotted lines, smaller size of objects, movement in the background, and less contrast of shapes (the same shapes repeated with small differences).
- © If the child appears to struggle to find hidden objects, encourage them to visually scan properly from left to right, starting at the top of the page and working towards the bottom.
- © Try to avoid giving in to the child and finding the objects in a picture for them. Instead give them clues about what the object is next to or which portion of the page it is in.
- © Reduce postural demands by having the child fully supported at a table or another comfortable position to ensure their attention is not spent on maintaining their posture.
- © Ensure there is appropriate lighting and that the visual activities is presented on a flat surface or slight angle for ease of viewing.
- © For those children who appear to struggle to pay attention for long or tend to watch others move about the room, consider making activities more visually appealing by adding pictures, colours and lights.

Below are a number of activities that will improve the way children are perceiving visual input.

- © Puzzles and 'I Spy' games
- © Search and find activities such as 'Where's Wally?'
- Spot the difference pictures
- Reading books
- © Guess Who? and Connect 4
- © Treasure hunts, memory cards, tangram shape puzzles
- © Sequencing patterns of shapes, toys or coloured objects
- © Catching and throwing
- Maze or dot-to-dot puzzles



For more information or to explore your child's visual perceptual needs, book an appointment with an occupational therapist.