

Visual perception:

Visual perception is the ability to make sense of something that is visually represented. Visual perception is made up of seven different areas namely:

- **Visual discrimination**
- **Visual memory**
- **Visual sequential memory**
- **Visual spatial relationships**
- **Visual form constancy**
- **Visual figure ground**
- **Visual closure**

Each area is discussed with regard to what each of these sections means, what problems you may see and also some activity ideas to develop each of these areas. During all of the activities recommended it is important to present it with a sensory motor approach so that the child has to:

- Listen to instructions
- Talk about what he is going to do
- Give a verbal commentary whilst performing the activity
- Touch and feel the equipment where appropriate to give a motor experience
- Look attentively at all times
- Initially work in a distraction – free environment

Visual Discrimination:

Definition: the skill of being able to differentiate between objects/images and recognise differences and similarities in size, shape or form, e.g. the difference between "a" and "o", matching or sorting.

Difficulties:

Difficulties in this area make recognising similarities and differences between images confusing. As quick, refined interpretations of visual information is affected, children may match items along a more general criteria and distinguishing characteristics or details may be ignored.

- Difficulty matching or recognising differences in numbers, letters, shapes, words, or objects.
- Reversals or inversions when writing letters and numbers
- Inappropriate use of letters
- Apparent inattentiveness and disorganisation

Games to develop this area:

- Snap card game
- Make pipe cleaners into shapes
- Collage – objects that are “the same”
- Activity books: find differences, odd one out
- Computer games
- Template activities
- Copy designs using -
 - Building blocks
 - Peg patterns
 - Form boards
 - Lego
 - Geometrix
 - Bead patterns
- Identifying letter shape when “drawn” on child’s back – the child needs to rely on the feel of the letter rather than seeing it – ideally should be done on skin rather than through clothes

Visual Memory:

Definition: the ability to remember what has been seen.

Difficulties:

Efficient visual memory is dependent on attention, concentration, keen observation and motivation. The relationship between visual memory and other forms of memory (auditory, tactile, movement) is important. Visual memory is composite of the different memory types and may be short term, long term and sequential.

- Problems in recalling non-verbal experiences
- Difficulties in remembering items or pictures once they are removed from view
- Remembering the correct sequence of letters in a word although the letters required may be known.
- Consistent spelling difficulties in the same word on one piece of paper
- Problems with left/right progression
- Inaccurate copying

Games to develop this area:

- Word search
- Draw picture of the days events
- Activity books
- Card games- snaps, pairs, rummy
- Simon says
- Copy designs
- Scrabble
- Kim's game with variations - how many items can the child recall?
- Copying patterns 3 D to 3 D and 2D to 2D
- Jumbled sentences/words to organise
- Spelling activities - fill in the blanks
- which is correct?
- Blackboard copying - squares/rectangles
- OHP designs - look at design (for 1 minute) then switch off OHP for child to draw what they can remember

Strategies:

- Provide child with worksheet to reduce difficulties when copying from the board
- Prompt sheet for specific subjects/tasks
- Use of spell check on computer
- Reinforce visual experiences with verbal comments/questions

Visual Sequential Memory:

Definition:

The ability to correctly sequence visual images from memory.

Difficulties:

Sequential memory is essential in ordering letters for spelling and ordering words into sentences (encoding process) and reading (decoding process).

- Remembering visual sequences and letter shapes
- Orientation in spelling
- Reading and number work
- Copying information from a blackboard
- Organising work

Games to develop this area:

- Copying motor/ body sequences
- Underline colour / letter combination
- Bead string sequences
- Sequential memory cards
- Reproducing from memory familiar words/stories/shopping list
- Grouping patterns of pegs, beads, animals
- Drawing and copying repeated shapes
- Writing groups of letters
- Copying from the board
- OHP work
- Card and board games

Strategies:

- Provide child with worksheet to reduce difficulties when copying from the board
- Prompt sheet for specific subjects/tasks
- Use of spell check on computer
- Reinforce visual experiences with verbal comments/questions

Visual Spatial Relationships:

Definition: The ability to perceive the relationship of external space to the body as well as seeing objects in space relative to other objects.

Difficulties:

Problems in this area may make letter formation difficult as the child may have difficulty identifying visual and spatial similarities and differences. There may be difficulties with knowing where to start writing. Letters may vary in size, spacing and alignment. Recognition of numbers and letters may be poor and some may be reversed. Copying from the blackboard to paper may be difficult. Keeping to personal boundaries (i.e. keeping all items on own desk) may be also be difficult and belongings may be scattered or disorganized.

- Dressing
- Moving in space
- Working with apparatus
- Writing on the line
- Copying pictures, plans or diagrams
- Working from 3D to 2 D
- Working form 2 D to 3 D
- Recognising spatial concepts/terms, e.g. under, near/far, left/right

Games to develop this area:

- Obstacle courses
- Adventure playgrounds
- Activities with bean bags, ropes, quoits – use spatial terminology, e.g. “go through/under/over”
- Constructional games
- Board games-solitaire, chess, draughts
- Crafts –origami, parquetry, woodwork
- Block designs to copy copy from 2D pictures and 3D images
- Peg patterns to copy }
} }
- Multi link
- Lego models
- Model making
- Equipment from maths trolley
- Placing objects in correct sequence of size/distance
- ‘Simon Says’ with actions relating to ‘standing’ in/next to/beside other objects. Vary the spatial commands and action required.
- Ask child to identify left and right hands prior to activity.
- Use 3D objects for the child to manipulate to assist in learning, e.g. ruler under the line of writing to be read.

Strategies:

- Mark objects with prompts to improve awareness of spatial position and direction, e.g. write Top/Bottom/Left/Right on desk and book; Left and Right on shoes.
- Identify one side of the body by wearing a watch on the dominant hand.
- Mark left margins of books so child knows where to begin a new line.
- Ensure use of lined paper/guide sheets/writing on graph paper to promote spacing and alignment.
- Use desk organisers.
- Prompt sheets, e.g. to demonstrate correct presentation (i.e. orientation of letters) – well spaced instructions to improve organisation
- Draw a box around, or highlight particular instructions you want to emphasise.
- Use different colours for maths symbols, e.g. - + x ÷
- Break down the task into small parts. Have a definite beginning, middle and end.

Visual Form Constancy:

Definition: The ability to recognize, match and name objects, shapes and patterns by essential details, even when presented from a different angle and in a different size.

Difficulties:

Difficulties may manifest in the confusion of identifying a specific letter or number visually. Sometimes it may be difficult for a child to remember how a letter looks or that it is the same letter when printed in different type or as a capital. (Spelling may be difficult as, although they may know the letter sound, they may not be able to remember how the letter looks or even how to start writing it.)

- Practical subjects e.g. math's, geography, science, design technology, PE and home economics
- Interpreting depth, length, height, perspective, angles, size
- Tasks requiring interpretation of 3 D to 3 D, 2D to 2 D and 3D to 2D

Games to develop this area:

- Set of same objects in different sizes to identify, match and grade
- Set of same shapes in different sizes
- Comparing and contrasting properties
- Copying 3D – 3 D patterns
- Copying 2D – 3D patterns
- Working with perspective
- Constructional activities, e.g. puzzles
- Craft – modelling, clay, drawing
- Magnetic cat/ bird
- Geometrix
- Dime equipment
- Harlequin blocks
- Find hidden figures, letter, objects within a background – increase complexity.
- Find and match geometric shapes that are rotated, inverted or reversed.
- Write the same word in different colours, styles and sizes, together with other words – circle the same word in different presentations.
- Guess the weight/size/distance from an object.
- Feely-bag games – identify, using touch alone, what is the same/different between objects.
- Shape by shape game.

Strategies:

- Use of graph paper to aid sizing when drawing/copying
- Prompt sheet
- Break tasks into individual components – step-by-step approach.

Visual Figure-Ground:

Definition:

The ability to extract relevant or pertinent details from an image containing irrelevant or distracting information

Difficulties:

Difficulty in this area can be seen in being inattentive, disorganised or being unable to scan for appropriate relevant detail. Children may have difficulty finding items (clothing, toys, books) in full drawers/cupboards. There may also be difficulty in finding details in a picture or in written form.

- Concentrating on relevant stimuli
- Ignoring what is irrelevant
- Shifting attention appropriately
- Scanning adequately
- Organising written work
- Noticing all the relevant words in a question
- Completing all sections in written assignment
- Keeping place when reading or copying work
- Extracting relevant information from text or diagrams

Games to develop this area:

- Activity books – spot the difference
- Jig-saw puzzles
- Board games –snakes and ladders, ludo
- Sorting games
- Pick up sticks
- Circle letters in newspaper
- Mosaics
- Peg patterns
- Picture cube puzzles
- Computer games
- Spiro graph
- Painting by numbers
- Trace specific objects on a worksheet that contains objects that are overlapping.

Strategies:

- Use reading markers to assist keeping place when reading along a line.
- Use lined/graph paper for child to write on.
- Give the child a prompt sheet/worksheet to prevent confusion when copying from the board – ensure the instructions are spaced apart.

- Highlight specific words/instructions you want the child to identify/follow.

Visual Closure:

Definition:

The recognition of an image when parts are not visible.

Difficulties:

Difficulties in this area when learning letter formations, in mental calculation and geometry. Spelling may be affected (even though there may be reading ability) as letters may not be blended into words accurately. Sometimes it is difficult to spell a word even if all the letters are available.

- Identifying a visual object from an incomplete or unclear representation
- Reading fluently
- Spelling

Games to develop this area:

- Jig saws
- Word searches
- Complete the picture
- Finish incomplete shapes stencils
- Model making (3D)
- Snap
- Dot- to dot
- Coloring in picture / shape
- Construction games
- Matching complete and incomplete shapes
- Scrabble

