



This NEPS Handout has been developed by educational psychologists and is based on current knowledge in this area. It is intended as a guide only. Not all the advice here may apply to any one student or situation. Teachers and parents may wish to identify the strategies that will work best for them.

## Visual Perception

Visual perception is the ability of the brain to interpret what our eyes see. It relies on our ability to focus our attention selectively and to screen out irrelevant information, to match and distinguish between objects, to recognise that despite changes in size, or orientation, objects are the same and the ability to remember visually presented information including the order in which it was presented.

Pupils with difficulties in this area may have:

- A poor sense of direction
- Difficulties with organisational skills
- A tendency to reverse words in both reading and spelling (eg. *saw* for *was*)
- Difficulty understanding abstract maths concepts, particularly in the areas of shape, space and measure
- Problems with comparative language (eg. taller than, shorter than)
- Difficulty completing jigsaw puzzles
- Problems with copying from the board
- Problems with interpreting and organising diagrams, charts, graphs, maps and other visual methods of recording
- Difficulties judging speed and distance
- Difficulty with letter and number orientation
- Difficulty with structuring and organising written work

They may also have:

- Strengths in logic, verbal and non-verbal reasoning
- Enjoyment in using multisensory strategies when learning
- A preference for a phonic approach to learning to read
- A preference to use audio methods of recording information.

Visual perception skills can be broken down into 4 subskills as follows:

- Visual discrimination
- Visual figure ground
- Visual closure
- Visual memory

### **Visual discrimination**

This is the ability to find similarities and differences between objects or written symbols. Difficulties may arise in matching items, for example shapes, letters for the younger child, or in discriminating between words/letters (b/d, p/q, has/had).

*Activity ideas to promote visual discrimination:*

- ◆ Picture matching
- ◆ Play pairing games: snap, bingo, dominoes
- ◆ Help out at home: matching socks, or plates by colours, size or shape
- ◆ Spot the difference pictures
- ◆ Spot the deliberate mistake
- ◆ Picture and number lotto
- ◆ Matching stickers to the pictures in sticker books
- ◆ Organize puzzle races. As they improve increase the number of the pieces
- ◆ Find small objects or animals in pictures: spot the duck in the Osbourne books, find Wally in *Where's Wally?* etc.

### **Visual Figure Ground**

This involves the ability to distinguish an object from its background.

Difficulties may arise at home/ school with:

- Finding a place on a page, finding details of a picture
- Finding a particular item
- Following recipes
- Checking for traffic when crossing the road
- Reading timetables
- Seeing relevant information from a board
- Unable to find details from a text or picture (comprehension exercises)

*Possible strategies include:*

- ◆ Keep the board tidy (free from irrelevant information/material). Clean after lessons
- ◆ Use colour to highlight groups of items or what the pupil is working on
- ◆ Provide differentiated text (comprehension passage in point form) with sufficient spacing for comprehension/reading exercises
- ◆ Use different coloured chalk/marker for different lessons/points
- ◆ Keep desktop tidy – assist child in doing so
- ◆ Provide photocopies of information that would have to be copied down from the board

### *Activities for visual ground:*

- ◆ 'I Spy' game which can be varied by using categories of things in the room, i.e. round, red, wooden, small etc.
- ◆ Word searches
- ◆ Board games such as *Snakes and Ladders*, *Scrabble* etc.
- ◆ Stickle bricks
- ◆ Card games
- ◆ Mazes
- ◆ Dot to dot or tracing pictures
- ◆ Finding letters on a keyboard
- ◆ Colouring in increasingly complicated pictures or number colouring

### **Visual Closure**

This is the ability to identify objects or forms when only partially visible, for example when reading we can scan only part of each word, but we are able to identify the whole word which makes reading fluent. A child with visual closure difficulties will need to orientate to each letter rather than a word, making reading stilted and slow. The child may then lose the meaning of what is read.

### *Indicators of problems:*

- Lack of ability to visualise
- Child cannot understand word completion tasks
- Child may not recognise parts of a whole/object/picture/word
- Inability to complete jigsaw puzzles or block pictures
- Slow at phonic skills
- Reading speed very slow
- Very poor at spelling names
- Does not use cues in reading
- Difficulty in recognising shapes or objects which are partially obscured
- Unable to read writing which is done in dots or recognising dot-to-dot pictures
- May have difficulties with letter formation and problems filling in missing letters e.g. a\_r\_pla\_e

### *Management strategies in the classroom:*

- Ensure abbreviations are explained e.g. Dec. for December
- The pupil may not be able to complete questions structured as follows:  
*The boy ..... the road*
- For reading: use a card with a cut away window to isolate two words. Then gradually increase the size of the window as the child is capable of orienting to more words

### *Activity ideas to promote visual closure:*

- ◆ Dot-to-dot pictures and puzzles
- ◆ Jigsaw puzzles (get the child to guess what the picture will be)
- ◆ Draw the left half of a picture and get the child to complete it. Also use half a shape or letter

- ◆ Spot the difference
- ◆ Construction games (*Lego, Meccano*, model airplanes and cars, etc).
- ◆ Write a sentence and leave out a word so that the child has to write in the correct one. Alternatively, use word games with letters: What's missing?
- ◆ Hangman, Battleship, Noughts and Crosses
- ◆ Tops or bottoms: cut some magazine pictures and paste them on cardboard. Cut them in half vertically or horizontally and ask: Which one matches with which? Cut into more than 2 pieces as skills improve

### **Visual memory**

This is the ability to remember things seen visually.

Difficulties may include:

- Learning to read quickly and efficiently
- Copying off the board
- Recalling a series of instructions
- Remembering where items have been left
- Organisational skills
- Copying from dictation – particularly in the correct sequence

*Management strategies in the classroom:*

- Reinforce verbal instruction with visuals including written diagrammatic prompts (and vice versa)
- Encourage rehearsal
- Provide cue cards from the pupil's table rather than expect the pupil to copy from the board
- Teach the older pupil to develop their own prompts when given instructions e.g. pupil writes key words/pictures to recall instructions given verbally or in written form

*Activity ideas to promote visual closure:*

- ◆ Memory tray: have a number of items on a tray/table in front of the child. Allow the child to remember them – then cover the items and ask the child to name them
- ◆ Kim's game: show the child some items. Get the child to turn around. Take one away and ask the child to name what's missing.
- ◆ The child arranges a picture cut into several parts after first seeing the whole picture
- ◆ Expose a picture with 6-8 familiar objects. Cover it and ask the child to remember as many items as they can – alternatively they can select identical items from a box
- ◆ Line up 6-8 objects on a table in front of the child. Have the child carefully look at them. Ask the child to close their eyes/turn around and shift the position of one object. Ask the child to return the objects to the correct position/order

## **Activities to develop visual perception skills**

The general activities listed here will help develop visual perception skills and can be incorporated into lessons to benefit all pupils. They may also be offered as activities for indoor play. They are broadly suited to primary aged children.

1. Post-a-shape – matching shapes to the correct opening.
2. Feely bag – ask the pupils to describe a shape or object by feeling it without looking, then describe it again when they can see it.
3. Copying 1 – a shape pattern or picture, using a magnetic board and pieces.
4. What's missing? 1 – complete a 2D shape.
5. What's missing? 2 – complete a picture.
6. Guess what? – ask the pupils to guess the object when only part is visible. A picture of an object could be cut into four pieces and only one part given at a time until the children have guessed what it is.
7. Object/picture matching – using everyday objects.
8. Jigsaw puzzles – of varying degrees of difficulty to suit individual pupils.
9. Matching shape to silhouette – using the correct orientation.
10. Matching picture to silhouette – using the correct orientation.
11. Draw a person – ask the pupils to copy the features of a real person, then compare.
12. Copying 2 – 2D shape patterns and pictures of varying degrees of difficulty.
13. Colouring 1 – symmetrical patterns of varying degrees of difficulty to suit individual pupils.
14. Colouring 2 – symmetrical pictures of varying degrees of difficulty to suit individual pupils.
15. Tessellation 1 – arranging magnetic 2D shapes on a board.
16. Tessellation 2 – drawing around 2D shapes.
17. Sensory maze activities – using a variety of material.
18. PE activities – involving directional and positional language. Use symbols as a reminder.
19. Multi-link pattern cards – and similar activities.
20. Instructions – follow auditory instructions while using a diagram or picture, to show how to build a model.
21. Noughts and crosses – using plastic or wooden pieces.
22. Computer-aided picture and design activities.