

# **Visual Perception**

# **VISUAL PERCEPTION**

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## **Definition**

A review of the literature regarding visual perception can give one a headache. Definitions vary according to the professional background of the writer, and issues regarding remedial techniques are controversial. Ophthalmologists, optometrists, psychologists, special educators, pediatricians, and occupational therapists all study this complex area; and all are likely to make recommendations for management of the child with weak visual perceptual skills in the school. Unfortunately, chances are that their suggestions will not only differ but conflict. This can be confusing for the people who are trying to follow the advice of the "experts" and are concerned with providing help to the child.

Here we will define visual perception as the ability to use visual information to recognize, recall, discriminate, and make meaning of what we see. Because its purpose is improvement of fine motor skills, this manual will address visual perception as it relates to guidance of movement, especially for classroom activities such as writing, putting together puzzles, and cutting with scissors.

## **Development**

During early childhood, children explore the world with eyes and hands and form mental connections about how things look and feel. Critical periods occur during development as children become maturationally ready and learn to perceive forms even if no training is provided. Through touch, movement, and vision, they learn to recognize the shape, size, and positional characteristics of objects that make them unique (form perception), and they can tell the difference between objects which differ (visual discrimination). They learn to focus visually on selected details of the environment and to screen out irrelevant information (figure-ground). They learn about relationships between spatial positioning of objects to each other and to themselves (spatial relationships) and they learn that when objects appear to change size or shape due to changes in position, they are still the same (size and shape constancy).

Spatial organization concepts develop in sequence. An understanding of vertical dimensional concepts develops first, followed by horizontal, and finally oblique and diagonal dimensional concepts. The ability to recognize forms and shapes develops at an earlier age than the ability to reproduce them motorically (visual-motor ability).

As children learn letters in the early grades, they rely heavily on visual information for guidance of movement and self-correction. Before learning to produce a motor pattern to form a shape, number, or letter, a child needs an image or idea of what the desired form looks like. Visual information is important for developing this idea (or image), which is then used for determining the correct motor pattern to be produced and for comparison with the result for self-correction.

## Difficulty with Visual Perception

Visual perception overlaps with many other psychological processes, including attention (ability to focus on relevant stimuli), memory (recognition or recall of previously retained information), sensory integration (functioning of two or more sensory systems simultaneously), problem solving, concept formation (ability to respond in a specific way to a class of stimuli), and simultaneous processing (ability to process many aspects of a sensory stimulus at the same time). Because of this, there are many reasons why a child might have difficulty processing visual information, including weakness in any of the above areas as well as weak ability to process visual information specifically. Difficulties with any of the above processes, or combinations of them, are commonly seen in children with developmental variations or learning disorders.

"Visual perceptual" tests (Gardner 1982; Colarusso and Hammill 1972) are available which do not require a motor response. They can be useful for providing a rough idea of how a child processes visual information; however, they have been criticized due to inadequate validity (Rosen 1978; Busch-Rossnagel 1985; Denison 1985).

Because of the variety of processes that can be related to apparent visual perceptual weakness, children with this problem do not all have difficulty with the same types of tasks. Many common areas of weakness are seen, however. Children with visual spatial confusion have difficulty recognizing symbols and are slow in learning to recognize letters and numbers in early grades. After learning to recognize them, they may continue to have difficulty recognizing errors in spatial arrangement of strokes within letters and numbers, or placement of letters or numbers on the line or page. Writing is often characterized by spatial inaccuracies affecting size of parts of letters or entire letters, irregular spacing between letters and words, and poor organization of lines on the page.

Some children with weak visual perception have great difficulty imagining what a letter, number, or shape is supposed to look like (visualization). After producing an incorrectly formed letter, number, or shape, if they are asked whether the formation "looks right" these children often answer "I don't know" or "yes." This often distinguishes them from a child with good visual perceptual skills but poor fine or visual-motor skills, who will recognize the difference between the production and the desired formation and say "no." These children may have handwriting that looks immature and poorly controlled, yet have good fine motor control for tracing and other tasks that do not require such complex judgments based on visual information. Self-correction is often a problem because fine discriminations are not possible for detection of errors. Weak visualization skills may cause difficulty with learning of sight words, spelling (Boder 1973), and confusion in geometric relationships, use of graphs, other spatial math concepts, and sense of direction (Levine 1987).

Children who have difficulty narrowing their visual focus to only the letters or words relevant to writing or reading activities have difficulty attending to the reading or writing process when material is presented on a visually distracting worksheet, chalkboard, or desk.

Children who have difficulty perceiving that an object is the same when presented from different angles may have difficulty copying information that is written in the vertical plane on the chalkboard onto a paper on a desk, which is oriented horizontally. A child who does not recognize a form when its size is changed or details are added may have difficulty reading different type styles or changing from manuscript to cursive writing. Weak visual perception also might cause a child to struggle with puzzles and games which involve recognition and matching of forms and shapes and correct spatial orientation for placing pieces appropriately.

Some children who have weak visual perceptual skills have kinesthetic skills that are a strength. This means that these children can feel how a letter is supposed to be formed more accurately than they can remember what it is supposed to look like. Often they are unable to tell you if a letter looks correct; but when encouraged to write the letter with finger or pencil, they form it correctly.

## **Beneficial Activities**

Choice of helpful activities depends on one's beliefs about the effectiveness of various approaches. Numerous programs have been designed to remediate visual perceptual deficits, and many research studies appear impressive in their rationale and support for visual perceptual training effectiveness. These programs are primarily process oriented. This means that by identifying weak processes (such as visual perception) and providing activities designed to improve brain function, the child's ability to perceive things visually will improve. For example, a child with poor figure-ground skills might practice finding objects or designs in a room or on sheets of paper with visually confusing backgrounds. Theoretically, the child would eventually be able to discern all objects in the environment, including letters on the page, more easily. To help with spatial relations, the child might navigate through an obstacle course or copy block designs in various patterns, and this would eventually improve the ability to form letters and numbers in correct spatial orientation. Process-oriented approaches are designed to "train the brain"—in this case, to improve its ability to focus on relevant visual aspects and to understand spatial relationships.

It is unclear, however, whether processes such as visual perception can be improved through training, and most current literature indicates that perceptually oriented training programs do not improve academic achievement (Wallace and McLoughlin 1979). Perceptual training programs and the research methodology used to demonstrate their effectiveness have been strongly criticized in the professional literature, and many experts are recommending an approach that focuses on testing and training task components which very closely approximate the skill to be learned. For example, the child with weak visual discrimination skills would practice discriminating correct and incorrect letter formations, rather than picking out a shape that differs from four others to improve general ability to discriminate visually. In other words, they are advocating teaching the skill directly rather than attempting to train the brain so that it can learn the skill more easily.

Three reputable national organizations have published position statements which clearly oppose perceptual (including visual perceptual) testing or training for children with learning disorders. The American Association for Pediatric Ophthalmology and Strabismus and the American Academy of Ophthalmology (1981) reported that no known scientific evidence supports claims for improving the academic abilities of dyslexic or learning disabled children with treatment based on visual training (including muscle exercises, ocular pursuit, or tracking exercises) or neurological organization training (laterality, balance, or visual-perceptual training). The Board of Trustees of the Council for Learning Disabilities (1987) stated that they oppose testing and training of perceptual functions due to the lack of empirical support for their effectiveness. It calls such training "experimental and nonvalidated" and "an obstruction to the provision of appropriate services."

Children with mental retardation have difficulty applying skills learned in one situation to use in another situation (generalization), so direct instruction is more likely to improve their visual analysis skills. Children with attention deficits often have difficulty with "visual perceptual tasks" because they approach them in an impulsive manner with little attention to the visual details which distinguish one form from another for later recall or differentiation. Indirect activities designed to improve visual perception will be unlikely to help these children; and teaching of strategies for focusing, slowing down, and directing attention to the details of letter, number, and word formations will be more likely to help.

Meanwhile, most school programs continue to include visual perceptual training in the educational programs of some children, and many educators and clinicians find these techniques useful when carefully chosen to meet individual needs. These types of training programs may be useful for some individuals with learning disorders and other diagnoses, and failure of research to demonstrate effectiveness may be due to inclusion of children for whom these techniques were not appropriate. Gaddes (1985) advocates the use of both direct (academic skills training) and indirect (sensorimotor training) remediation approaches for children with learning problems.

Presentation of this controversial issue is not intended to convince the reader either way; it is intended only to raise the issue for consideration. While leaving judgments regarding the merits of various process-oriented programs to parents and teachers, this manual will present activities based on a direct-instruction and compensatory approach. This approach may be more practical for use by parents and in the classroom.

This means that the activities presented here deal directly with teaching of skills, or parts of skills that are difficult for a particular child, with that child's visual perceptual weaknesses taken into consideration. Choice of activities depends on the types of skills which the child finds troublesome. Children cannot be expected to write letters, numbers, or words accurately unless they are able to recognize and remember the form which they are trying to achieve and to discriminate inaccurate details for self-correction. Any activity that involves looking at, feeling, or making letters and numbers will help with these skills.

Classroom teachers are the experts on letter and number recognition activities and can add to the few activities suggested in this section. Activities that emphasize tactile (touch) and motor input for letter discrimination and recognition will be helpful for children with weak visual skills. Activities that couple tactile with visual, auditory, and movement sensory input for formation, recognition, and correction of letter and number forms are most likely to improve the child's ability to recall them accurately.

### Compensatory Strategies

Strategies can be devised to make learning easier despite weak visual perceptual skills. For the example used above (weak visual recognition or memory), compensatory strategies focus on alternate ways to recall how letters, numbers, or words look. This could include placement of a strip with letters and numbers on it on a child's desk for use during writing; verbal strategies for remembering the correct form; or writing with eyes averted or closed if visual information confuses the child.

When weakness in any visual perceptual process causes great difficulty in the classroom, it is appropriate to use bypassing techniques that eliminate or decrease visual perceptual demands. Use of a word processor, verbal demonstration of knowledge, or decreased writing requirements can help to keep the focus where it should be—on the content, organization, and rules of writing, rather than on the act of producing letters and words and orienting them correctly on the page.

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Child's Name \_\_\_\_\_

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VISUAL PERCEPTION  
Classroom and Individual Practice

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## PRE-WRITING LINES ACTIVITY

### Purpose

To improve recognition and imitation of vertical, horizontal, and diagonal pre-writing lines

### Materials

Desk-top easel, felt board, desk-top chalkboard, or other vertical surface

Two 1" X 8" strips of cardboard, construction paper, wood, felt (if using felt board), or plastic place-mat material

### Preparation

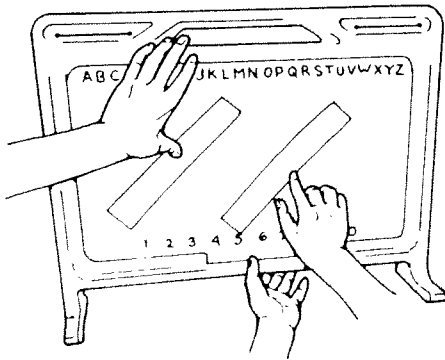
Make sure that the child understands the concepts and language for *the same* and *different* before beginning this activity.

### Position

Child is seated at desk or on floor. Upright surface is located directly in front of child, at face level.

### Procedure

1. Place one strip vertically (straight up and down) on the upright surface and hold it there with your left thumb.
2. Place another strip to the right of the first strip, horizontally or at an angle.
3. Child identifies whether strips look the same. ("Does yours look like mine?")
4. Each time child answers correctly, move the strip on the right closer and closer to the same positioning as the strip on the left, to make discrimination more difficult.
5. If child answers "The same" when strips are not positioned the same, move the strip on the right closer and closer to the vertical strip and keep asking if it looks the same. If child is unable to discriminate the difference, place the right strip on top of the vertical strip and point out that they are different. Let child feel how they don't line up; have child trace each with a finger to feel the difference. Then move them slightly apart, and ask again.
6. When consistently recognizing vertical line placed by adult, child places strip to imitate position of line.
7. Repeat for horizontal line. Then repeat for diagonal lines.





### **Desired Response**

Child accurately uses strip to imitate spatial placement of vertical, horizontal, and various angles.

### **Variations and Adaptations**

Upright surfaces usually are easier for children to begin with, but child may need practice transferring these skills to a horizontal surface. When child is accurate on a vertical surface, repeat the activity with strips on the desk top. If child has difficulty with this, encourage positioning of the head so the face is parallel to the desk surface (same position relative to the lines as during use of the upright surface). As child progresses, encourage child to raise head gradually until normal posture is assumed.

This activity can be done using sticks on the beach or playground.

Follow this activity with one that incorporates the use of vertical, horizontal, or diagonal lines, such as forming shapes or letters with blocks, felt pieces, or pipe cleaners. Point out and praise spatial accuracies.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

VISUAL PERCEPTION  
Classroom and Individual Practice  
**MAKE-A-SHAPE ACTIVITY**

**Purpose**

To improve recognition and imitation of correct formations for shapes

**Materials**

Vertical felt board

Felt pieces: eight 8" strips, eight 4" strips, four large half-circles, four small half-circles

**Preparation**

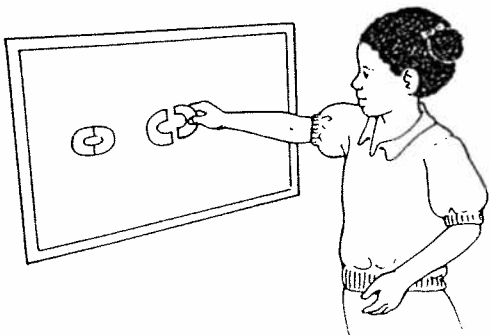
Make sure that the child understands the concepts and language for *the same* and *different* before beginning this activity.

**Position**

Child is seated or standing with upright felt board located directly in front of child at face level.

**Procedure**

1. Place felt pieces on board to make circle, square, triangle, and rectangle one at a time. Ask child to identify shapes by name.
2. When this can be completed with 100% accuracy, make inaccurately formed shapes (for example, use one large half-circle and one small one to make a circle). Ask, "Is this how a circle looks?" Child identifies errors and corrects them by replacing incorrect pieces.
3. Child makes shapes to try to "stump" adult.
4. Child makes shapes to match those made by adult.
5. Child makes shapes and describes how they look (for example, "This is a rectangle with two short sides and a long top and a long bottom").



**Desired Response**

Child recognizes errors in all inaccurate shape formations and forms all shapes correctly.

**Variations and Adaptations**

Upright surfaces usually are easier for children to begin with, but child may need practice transferring these skills to a horizontal surface. When child is accurate on a vertical surface, repeat the

activity with strips on the desk top. If child has difficulty with this, encourage positioning of the head so the face is parallel to the desk surface (same position relative to the lines as during use of the upright surface). As child progresses, encourage child to raise head gradually until normal posture is assumed.

This can be done with pieces of plastic place-mat material or cardboard, on a flat surface.

These materials can be adapted for matching and sorting activities, if child has difficulty with these skills.

Spatial inaccuracies can be graded from obvious to very subtle, to increase the demands for visual analysis as skills improve. For example, a rectangle can have one of its parallel sides angled so that it is not parallel, or angles for triangles can be off slightly in a matching activity.

Follow this activity with play or craft activity that incorporates the use of shapes made with blocks, felt pieces, or pipe cleaners. Point out and praise spatial accuracies.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

**VISUAL PERCEPTION**  
**Classroom and Individual Practice**  
**LINE-'EM-UP PUZZLE ACTIVITY**

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**Purpose**

To improve ability to use visual and tactile cues for orienting puzzle pieces for placement

This activity is helpful for children who choose and place puzzle pieces by trial and error rather than analyzing and orienting before placement.

**Materials**

Form boards or puzzles with appropriate number of pieces for developmental level (with knobs, if fine motor skills are weak); slanted desk-top easel, if available

**Position**

Child is seated at desk or on floor. Puzzle is placed on easel directly in front of child. If no easel is available, child lies on stomach on floor, propped on elbows, with puzzle directly below face.

**Procedure**

1. Adult hands child one form or puzzle piece.
2. Child looks at and feels piece with hands, and describes the shape or something about the shape that makes it unique (for example, "It has pointed corners"). Child can feel around the edge with index finger. Adult assists in getting a description which will match the hole to the piece, by asking questions (such as "How many pointed corners?").
3. Child looks at and feels holes in puzzle board, and identifies one which fits the description. Adult assists by asking discriminating questions ("How many points does the hole have? How many does that piece have?") so correct hole is chosen.
4. Child places piece next to the hole and turns it until the unique details which were described are lined up.
5. Child inserts piece.
6. Adult hands child a second puzzle piece.

**Desired Response**

Child accurately recognizes details of puzzle pieces and holes, matches pieces to holes, rotates pieces, and inserts to complete puzzle.

### Variations and Adaptations

Puzzle activities can be graded in many ways to decrease or increase difficulty. Adapt this activity to ensure that the child is challenged, yet achieves success.

First, present form boards, which contain the simplest shapes and the least visual distractions. Once they are completed with ease using the method described above, progress to simple puzzles with only a few pieces. As skill improves, introduce more visually distracting puzzles and assist child in focusing and organizing the task by encouraging child to match unique aspects of pieces to holes. For example, encourage child to notice color and lines when matching piece to hole, and to use this information as well as shape to choose and orient pieces. Encourage verbal description of the piece and of a hole which it would fit into.

Cover all but two puzzle holes if child has difficulty focusing and choosing correct hole. When this is easily accomplished, uncover one more hole.

Instead of handing child one puzzle piece, as skills improve place a few pieces, then all pieces, on the table in front of the child.

Upright surfaces often are easier for children to begin with, but child may need practice transferring these skills to a horizontal surface. When child is accurate on a vertical surface, repeat the activity on a desk top. If child has difficulty with this, encourage positioning of the head so the face is parallel to the desk surface (same position relative to the puzzle as during use of the upright surface). As child progresses, encourage child to raise head gradually until normal posture is assumed.

If child has no difficulty working on a horizontal surface, skip the vertical stage and work on puzzles at a desk or table or on the floor.

Focus child's attention on matching tactile to visual shape by encouraging child to feel puzzle piece with one hand without looking, and to match it to the hole which is identified visually. This is a more difficult activity and should be approached in a simple manner (for example, matching one familiar shape, such as circle or square, to one of two or three holes). Use more complex shapes and puzzles as skill increases.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

**VISUAL PERCEPTION**  
**Classroom and Individual Practice**

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## **MAKE-AND-MATCH PUZZLE ACTIVITY**

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### **Purpose**

To improve ability to use visual and tactile cues for orienting puzzle pieces for placement

This activity is helpful for children who choose and place puzzle pieces by trial and error rather than by analyzing and orienting before placement.

### **Materials**

Plastic or wooden form boards or puzzles with appropriate number of pieces for developmental level (with knobs, if fine motor skills are weak); marker, pencil, or crayon; paper

### **Position**

Child is seated at desk or on floor.

### **Procedure**

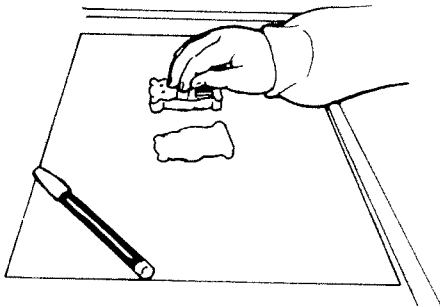
1. Child selects a puzzle piece or form, and traces around outside edges using marker, pencil, or crayon on paper.
2. Child orients and places the puzzle piece over tracing. If the piece is incorrectly placed, adult asks whether child can see any of the tracing sticking out around the piece. If so, child moves the piece to line it up so tracing can't be seen.
3. Child repeats with other puzzle or form pieces.
4. Child repeats activity, this time feeling the puzzle piece with one hand without looking, verbally describing it, and matching it to the visual tracing.
5. Child places pieces in puzzle or formboard.

### **Desired Response**

Child accurately recognizes visual and tactile details of puzzle pieces and tracing, matches them, and orients them correctly for placement.

### **Variations and Adaptations**

If child is unable to line up the piece with the tracing, encourage child to look at and feel the piece and describe the shape or something about the shape that makes it unique (for example, "It has pointed



corners"). Adult assists in getting a description which will match the tracing to the piece by asking questions (such as, "How many pointed corners?").

Adult assists with tracing if child is unable to trace the form or puzzle piece independently.

Encourage child to close eyes and feel around the edge of the puzzle piece with index finger, and to trace over the tracing with index finger, to find out how the shapes feel.

This activity can be done with cookie cutters and rolled-out clay. Adult presses shapes lightly into clay (or cookie dough); child matches cutter to shape in clay, lines it up, and pushes through to cut out the shape.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

VISUAL PERCEPTION  
Classroom and Individual Practice

## LETTER AND NUMBER RECOGNITION— PIPE CLEANER ACTIVITIES

### Purpose

To improve ability to recognize and visualize letters and numbers

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills. For children with weak visual abilities, emphasize tactile (touch), verbal, and motor input when teaching letter and number forms.

### Materials

Pipe cleaners; white glue; index cards

### Procedure

1. Child makes letters with pipe cleaners and describes how they are formed.
2. Child dips pipe cleaner letters in white glue and puts them on index cards.
3. When dried, child closes eyes and identifies letters and numbers on cards by tracing with index finger.
4. Tracing activity is followed by a writing activity.

### Desired Response

Child accurately uses visual, verbal, touch, and kinesthetic (movement) information to produce and recognize accurate letters and numbers.

### Variations and Adaptations

Form letters or numbers with string or yarn dipped in white glue and pasted on index cards.



*Use of these activities should be directed by a qualified therapist.*

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Child's Name \_\_\_\_\_

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VISUAL PERCEPTION  
Classroom and Individual Practice

## LETTER AND NUMBER RECOGNITION— CLAY ACTIVITIES

### Purpose

To improve ability to recognize and visualize letters and numbers

For children with weak visual abilities, emphasize tactile (touch), verbal, and motor input when teaching letter and number forms. Combining tactile with visual, auditory, and movement sensory input will increase the child's ability to recall the formation for recognition or reproduction.

### Materials

Clay, putty, or cookie dough

### Preparation

Roll clay into long tubes and form into letters and numbers so that they resemble the formations being taught in the child's classroom.

### Procedure

1. Child rolls clay into long tubes.
2. Child forms letters or numbers from clay tubes without looking at models.
3. Child compares the letters to models made by an adult, verbally describes any differences, and makes changes until the two are the same.
4. Child says the name of the letter or number while tracing it with index finger.
5. When several letters have been made, child closes eyes and identifies them by touch. Child describes what is felt and names the letter or number.



### Desired Response

Child accurately discriminates visual and tactile details of letter and number forms to produce them accurately and to recognize them visually and by touch.

### Variations and Adaptations

Child traces around clay forms with marker or pencil, then writes the letter or number next to the form, and finally writes the letter or number from memory.

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Child's Name \_\_\_\_\_

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VISUAL PERCEPTION  
Classroom and Individual Practice

## LETTER AND NUMBER RECOGNITION— PLASTIC LETTERS ACTIVITY

### Purpose

To improve ability to recognize and visualize letters and numbers

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual “images” of symbols may need extra practice for developing these skills.

### Materials

Plastic letters and numbers; paper or cloth bag; paper; markers

### Preparation

Place plastic letters and/or numbers into bag.

### Procedure

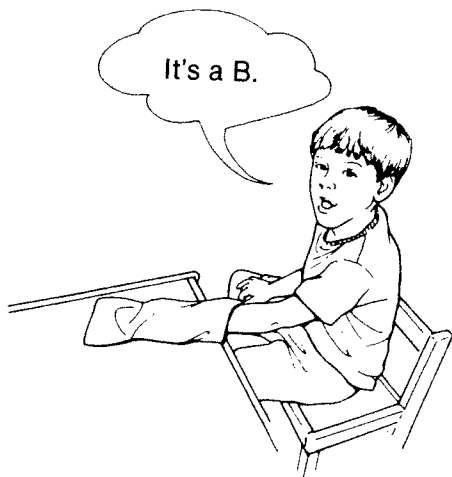
1. Child reaches into bag and grasps a letter or number.
2. Child identifies letter or number without looking, and then removes it from the bag.
3. When letters are not identified correctly, adult identifies the letter, child feels it without looking, describes the shape, names the letter, looks at it carefully, then replaces it in the bag.
4. Letters which are identified correctly are placed in a pile.
5. Steps 1-4 are repeated until no letters or numbers are left.
6. Plastic letters are then used to make words appropriate for the child's grade level.
7. Words are written on paper with marker, without model.

### Desired Response

Child accurately recognizes details of letter and number forms, using touch, visual, and verbal cues so that all letters and numbers are identified.

### Variations and Adaptations

This activity can be fun for two or more children. Children take turns reaching into the bag, identifying letters by touch, and taking them out of the bag. The other child decides whether the form is correctly identified when it is shown. If the form was not correctly identified, the second child tells what letter it is.



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Child's Name \_\_\_\_\_

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**VISUAL PERCEPTION**  
**Classroom and Individual Practice**

# **RECOGNIZING ERRORS WITHIN LETTERS AND NUMBERS—CORRECTION GAME**

## **Purpose**

To improve ability to make fine discriminations of spatial or formation errors within letters or numbers

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.

## **Materials**

Upright chalkboard; chalk

## **Preparation**

Familiarize yourself with letter and number formations being taught in the child's classroom.

## **Procedure**

1. Write a letter or number on the chalkboard, deliberately making inaccuracies of formation, size, or spatial orientation. (For example, make the letter E backward and with one horizontal stroke longer than the others.) If necessary, adult identifies the letter by name.
2. Child identifies errors and describes what is wrong.
3. Child gets one point for each error correctly identified. Adult gets one point for each missed error.
4. If child misses an error, write the letter correctly next to the incorrect letter on the board. If child then identifies the error, one point is given to child.
5. Child erases adult's letter (or parts of it), to correct the errors.
6. Steps 1-5 are repeated with all letters and numbers being practiced.

## **Desired Response**

Child recognizes and corrects inaccuracies within all letter and number forms.



### **Variations and Adaptations**

This activity can be fun for two or more children. Children take turns writing a letter or number on the board. The other child decides whether the form contains errors, and what they are. The writing child gets points for perfect letters or numbers, and the error-detector gets points for accurate corrections.

For some children with strong motor memory, it helps to write the letter on paper, then compare the written letter with the incorrect formation being analyzed. The letter which the child writes is often more accurate than the visual "image" in memory and can be used for comparison when analyzing visual information.

The errors which the adult introduces in the letters and numbers can be very easily detected or more subtle. This should be graded so that the child is usually successful. The error difficulty increases as skills improve.

For children with strong verbal skills, it sometimes helps to repeat a verbal rhyme to accompany letter formation.

Prepare worksheets with words, sentences, or lists of letters or numbers, some of which contain inaccuracies. Children circle all incorrect letters or numbers.

*Use of these activities should be directed by a qualified therapist.*

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**RECOGNIZING DETAILS WITHIN LETTERS AND  
NUMBERS—SELF-CORRECTION**

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**Purpose**

To improve ability to make fine discriminations of spatial or formation errors within letters or numbers and to use this information for self-correction

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.

**Materials**

Classroom written work; red pencil; upright chalkboard; chalk

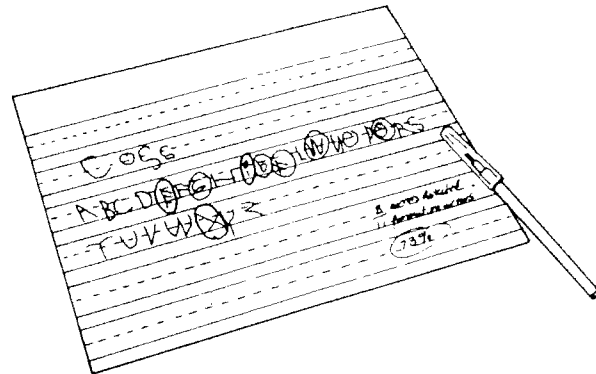
**Preparation**

Familiarize yourself with letter and number formations being taught in the child's classroom. Have child successfully complete the within-letter correction game before doing this activity.

**Procedure**

1. Child looks at paper containing written work of self or other child, and circles all errors of letter formation or spatial orientation of letter parts with a red pencil. Child focuses only on errors within each letter, not on letter size in comparison with other letters or spatial arrangement in relation to lines on the paper.
2. After errors have been identified, child verbally describes errors to adult and verbally explains how they would be corrected.
3. For each correction, child closes eyes and imagines how the letter should look, then opens eyes and produces correct letter on vertical chalkboard, using large arm movements.
4. When adult believes child can accurately correct the letter, child produces the letter with pencil on lined paper similar to that used in the original work.
5. If child misses an error, adult asks child to close eyes and imagine how the letter is supposed to look. Child then writes letter on chalkboard and compares to the letter with the missed error. If child is still unable to recognize error or produce letter accurately, adult demonstrates correct letter on chalkboard and child uses this for comparison. Letter is recorded by adult for future practice.

6. After each paper is corrected, calculate percentage of errors detected (number of errors detected divided by total number of errors) and record this. Monitor progress and point it out to the child.



### Desired Response

Child recognizes and corrects inaccuracies within all letter and number forms.

### Variations and Adaptations

This activity is fun for two or more children. Children circle errors on each other's papers and work cooperatively to correct them.

For some children with strong motor memory, it helps to write the letter on paper, then compare the written letter with the incorrect formation being analyzed. The letter which the child writes is often more accurate than the visual "image" in memory and can be used for comparison when analyzing visual information.

For some children with strong verbal skills, it helps to repeat a verbal rhyme to accompany letter formation.

Prepare worksheets with words, sentences, or lists of letters or numbers, some of which contain inaccuracies. Children circle all incorrect letters or numbers.

When child does this fairly well, incorporate this exercise into regular classroom work by asking child to circle errors after written assignments. Child describes or shows with large hand movements how the letter would be corrected, then forms the letters correctly on a separate sheet of paper. Ensure that extra time is arranged so child does not miss recess or other time for fun to complete this, or child may see self-correction as a punishment. Self-correction habits will be important for this child and should be praised and approached as positively as possible. Focus on the challenge of detecting and correcting errors rather than on the number of errors made.

Have child correct letters on a sheet of paper instead of chalkboard (although the upright surface is ideal for visual analysis in the learning stages of this activity).

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

VISUAL PERCEPTION  
Classroom and Individual Practice

## RECOGNIZING ERRORS WITHIN LETTERS AND NUMBERS—FLASH CARDS

### Purpose

To improve ability to make fine discriminations of spatial or formation errors within letters or numbers and to use this information for self-correction

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.

### Materials

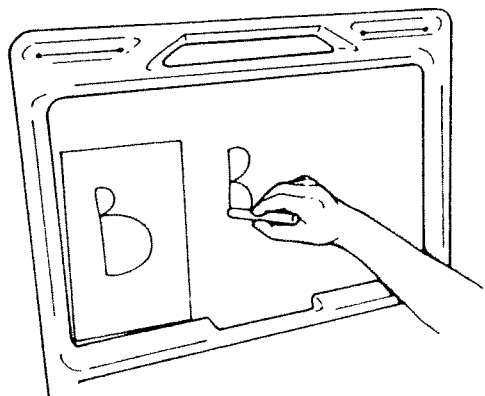
36 index cards; upright chalkboard; chalk

### Preparation

On one side of each index card, write a letter of the alphabet or a number from 1 through 10, written accurately in the manner being taught in the child's classroom. On the other side, write the same letters and numbers but with spatial or formation errors. Hold up each card with the correct formation showing; ask child to identify the letter or number. If child does not correctly identify all letters and numbers, continue practicing letter and number recognition with these cards or with other activities before beginning within-letter corrections.

### Procedure

1. If all letters are correctly identified, present one card with the incorrect side showing, say what letter it is supposed to be, and ask if the letter looks right.
2. If child identifies letter or number as not looking right, ask what is wrong and how it could be corrected. Child verbally describes how it can be corrected, and draws the correct form on the upright chalkboard.
3. If child misses an error, adult asks child to close eyes and imagine how the letter is supposed to look. Child writes the letter or number in the air several times, using large arm movements. Adult demonstrates correct movement pattern, if necessary. Child writes letter on chalkboard and compares to the card with the missed error. If child is still unable to recognize error or produce letter accurately, adult demonstrates correct letter on chalkboard and child uses this for comparison. The card is placed in a separate pile for future practice.



4. Repeat for all letter and number cards being practiced. Present some correct and some incorrect letters.
5. Each time you do this activity, record the number of cards which the child identifies or corrects accurately. Monitor progress and point it out to the child.
6. Carry this activity into classroom writing activities, by encouraging child to imagine how the letters look or feel before writing them and then helping child to recognize and correct errors as described above.

### **Desired Response**

Child recognizes inaccuracies within all letter and number forms, and corrects them.

### **Variations and Adaptations**

This activity can be fun for two or more children. Children take turns identifying letters and errors and work cooperatively to correct them.

After child is successful with this activity when presented in upright orientation, have child do it with cards placed horizontally on the desk.

For some children with strong motor memory, it helps to write the letter on paper, then compare the written letter with the incorrect formation being analyzed. The letter which the child writes is often more accurate than the visual "image" in memory and can be used for comparison when analyzing visual information.

For children with strong verbal skills, it sometimes helps to repeat a verbal rhyme to accompany letter formation.

When the child does this fairly well, incorporate this exercise into regular classroom work by asking child to circle errors after written assignments. Child describes or shows with large hand movements how the letter would be corrected. Ensure that extra time is arranged so child does not miss recess or other time for fun to complete this, or child may see self-correction as a punishment.

This activity can be done using finger paint on paper or a stick in sand. Adult forms incorrect or correct letters and asks child to identify errors, as described above. Letters are erased with a hand and replaced with the correct letter.

*Use of these activities should be directed by a qualified therapist.*



Child's Name \_\_\_\_\_

Date \_\_\_\_\_

VISUAL PERCEPTION  
Classroom and Individual Practice

## SPACING BETWEEN LETTERS AND WORDS— DISCRIMINATION ACTIVITY

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### Purpose

To improve ability to discriminate between accurate and inaccurate spacing of letters and words on a line

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.

### Preparation

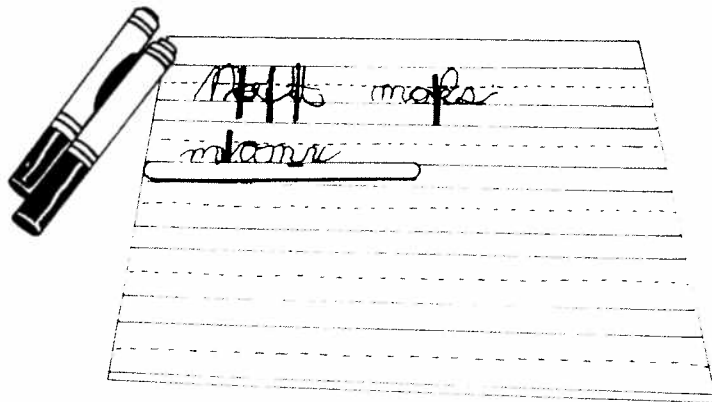
Child should be able to recognize and form letters consistently before focusing intensively on spatial placement activities.

### Materials

Pencil; red and green markers; a page of written work with spacing errors (this can be made by an adult, or a sample of a child's classroom writing can be used); classroom writing paper; either a 1" x 5" strip of cardboard or a craft stick or tongue depressor

### Procedure

1. Child and adult look at writing sample and decide which letters are spaced "just right." A line of this width is drawn on the top edge of the cardboard strip or craft stick with marker. This is repeated for the correct spacing between words.
2. Adult identifies spacing errors on the first three words of the writing sample by inserting red marker lines between letters or words that are too far apart, and green lines between letters or words that are too close together.



3. For the next three words, child identifies spacing errors and tells adult whether the letters or words are "too close" or "too far apart." Adult uses the appropriate colors to insert lines between letters and words identified by child. If child can't identify errors, the cardboard strip is lined up under the line of writing and used to check spacing.
4. Child places red and green lines between letters to identify errors for the remainder of the writing sample, using the cardboard strip to check, if necessary.
5. After written work is completed in class or at home, child uses red and green colors to identify spacing errors and cardboard strip to check accuracy of spacings.

### **Desired Response**

Child accurately identifies spacing errors between letters and words.

### **Variations and Adaptations**

This activity can be fun for two or more children. Children mark inaccuracies on each other's papers and work cooperatively to try to decrease the number of corrections on later papers.

Teachers correct work in this manner to draw the child's attention to this spatial aspect of writing.

Children use this method to see their own improvement in spacing of letters and words, as number of red and green lines decreases on subsequent attempts.

Prepare worksheets with words and/or sentences that are spaced irregularly. Child marks all uneven spacing as described above. As skills improve, grade from very obvious irregularities to subtle irregularities in spacing.

If spatial aspects of writing are very difficult, focus on them only during penmanship or individual instruction time so child's ability to attend to the content will not be decreased.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

VISUAL PERCEPTION  
Classroom and Individual Practice

## PLACEMENT OF LETTERS WITHIN LINES— DISCRIMINATION ACTIVITY

### Purpose

To improve ability to discriminate between accurate and inaccurate spatial arrangement of letters or numbers within lines

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.

### Materials

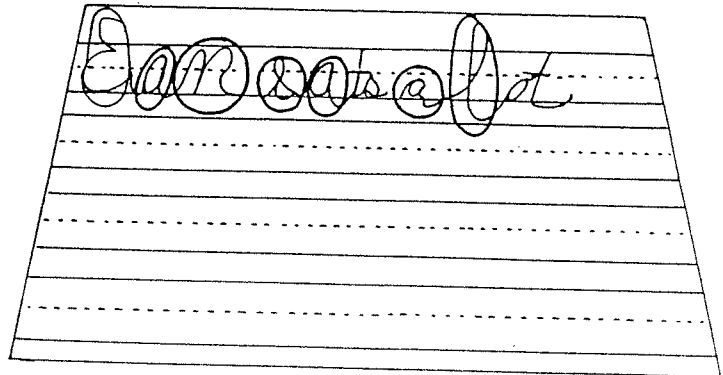
Classroom written work; red pencil or marker

### Preparation

Child should be able to recognize and form letters consistently before focusing intensively on spatial placement activities.

### Procedure

1. Demonstrate how to mark letters which are not arranged accurately within the lines. Circle all such letters with a red pencil as child watches; describe what is wrong (for example, "This E sticks out on top of the top line").



2. Child looks at another paper and marks letters which are not on or within the lines; and verbally describes what is wrong with each.
3. If child is unable to recognize incorrect placement, demonstrate writing letter within lines and place model next to incorrect example for comparison. Child points out differences and circles letter.

### **Desired Response**

Child accurately recognizes inaccuracies of spatial placement of all letters or numbers on the line.

### **Variations and Adaptations**

This activity can be fun for two or more children. Children circle errors on each other's papers and work cooperatively to correct them.

Prepare worksheets with words, sentences, or lists of letters or numbers, some of which are inaccurately arranged on the line. Child circles all incorrect letters or numbers.

When child does this fairly well, incorporate this into regular classroom work by asking child to circle errors after written assignments. Child describes how the letter is corrected, then forms the letters correctly on a separate sheet of paper. Focus on the challenge of detecting and correcting errors rather than on the number of errors made.

If spatial aspects of writing are very difficult, focus on them only during penmanship or individual instruction time so child's ability to attend to the content will not be decreased.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

VISUAL PERCEPTION  
Classroom and Individual Practice

## LETTER OR NUMBER SIZE—DISCRIMINATION ACTIVITY

### **Purpose**

To improve ability to recognize correct size letters or numbers in relationship to other letters and numbers on a page

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.

### **Materials**

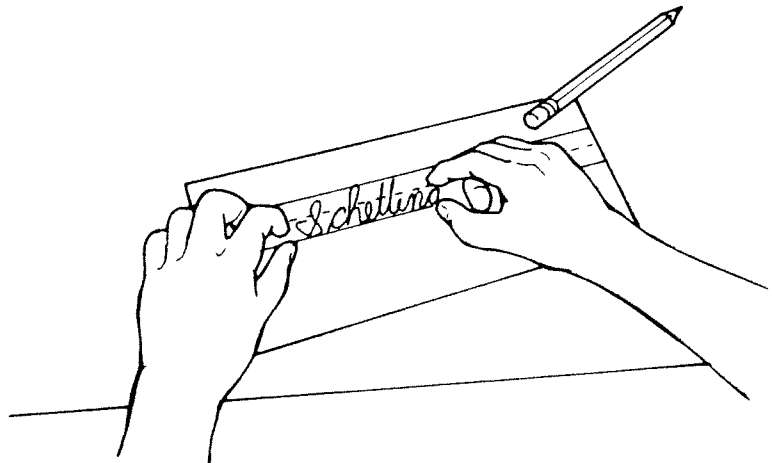
Classroom written work; blue pencil; model of correct letter and number formations within lines

### **Preparation**

Child should be able to recognize and form letters consistently before focusing intensively on spatial placement activities.

### **Procedure**

1. Adult demonstrates using blue pencil to circle several letters which are too big or too small. Adult asks child to describe why letter was circled.
2. When child clearly understands the task, child repeats this on own worksheet, describing why letter is circled.
3. If child has difficulty discriminating sizes, child looks at model and writes letter using lines for guides, then holds letter next to the example for comparison. If task still is difficult, child uses fingers to measure sizes for comparison.



### **Desired Response**

Child accurately recognizes letters or letter parts which are too big or too small in comparison with other letters.

### **Variations and Adaptations**

Start with capital letters, which are all the same size. When child discriminates upper-case letter sizes consistently, proceed to lower-case letters.

This activity can be fun for two or more children. Children circle errors on each other's papers and work cooperatively to correct them.

Prepare worksheets with words, sentences, or lists of letters or numbers, some of which are too small or large in relation to the others. Child circles all incorrect letters or numbers.

When child does this fairly well, incorporate this into regular classroom work by asking child to circle size errors after written assignments. Child rewrites any words that contain incorrect size letters, attempting to keep letter size consistent. Ensure that extra time is arranged so child does not miss recess or other times for fun, or child may see self-correction as a punishment. Self-correction habits will be important and should be praised and approached as positively as possible. Focus on the challenge of detecting and correcting errors rather than on the number of errors made.

If spatial aspects of writing are very difficult, focus on them only during penmanship or individual instruction time so child's ability to attend to the content of written assignments will not be decreased.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

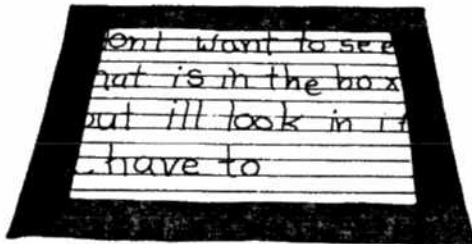
VISUAL PERCEPTION  
Classroom and Individual Practice

## MARGINS—DISCRIMINATION ACTIVITY

### Purpose

To improve ability to write within margins

Children with visual spatial confusion, difficulty focusing on visual detail, or difficulty remembering visual "images" of symbols may need extra practice for developing these skills.



### Materials

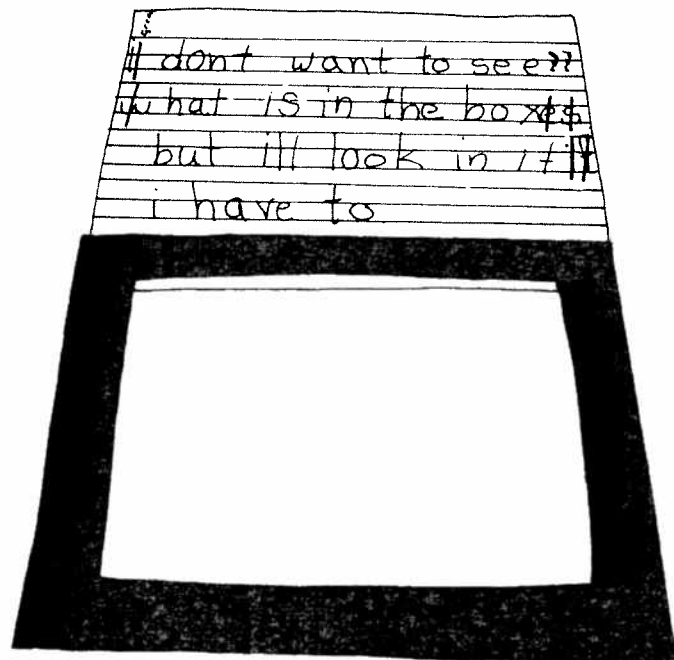
Classroom written work; red and green pencils; cardboard or oaktag paper with center cut out to indicate 1" margins on all sides

### Preparation

Child should be able to recognize and form letters consistently before focusing intensively on spatial placement activities.

### Procedure

1. Adult demonstrates how to mark errors on written work (the child's work or that of other children). Use a green pencil to draw a line through letters that are located too far to the left or right of the left margin.
2. Child looks at another paper and marks letters that are too far from the left margin.



3. Adult repeats demonstration, using red pencil to draw a line through letters to the left or right of the right margin.
4. Child repeats this on own paper.
5. If unable to make this discrimination, child uses the cardboard template to provide cues. If necessary, child can use template to draw margin lines (green for left, red for right).
6. Child uses this method to check own work; attempts to decrease the number of letters that extend beyond the margins.

### **Desired Response**

Child accurately recognizes spatial boundaries of the page.

### **Variations and Adaptations**

If this activity is difficult, begin by ruling red and green vertical lines for margins before child starts marking letters that extend too far. Fade this cue by removing one line and then the other as child's ability improves.

If you want child to use margins of different sizes, mark right side of cardboard template with red marker, left with green, to indicate how the template should be oriented over the paper.

Prepare worksheets with sentences which at some points extend beyond right and left margins. Child marks all incorrect letters.

When child does this fairly well, incorporate this exercise into regular classroom work by asking child to mark margin errors after written assignments. Focus on the challenge of detecting and correcting errors rather than on the number of errors made.

If spatial aspects of writing are very difficult, focus on them only during penmanship or individual instruction time so child's ability to attend to the content will not be decreased.

*Use of these activities should be directed by a qualified therapist.*



Child's Name \_\_\_\_\_

Date \_\_\_\_\_

**VISUAL PERCEPTION  
Compensatory Strategies**

**FIGURE-GROUND CONFUSION**

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**Purpose**

To help child focus on relevant visual details of fine motor activity

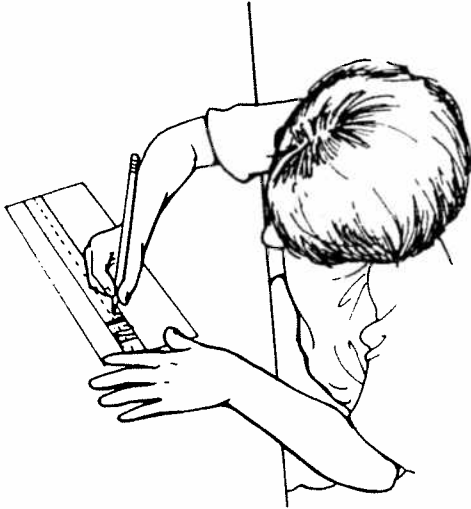
**Strategies**

*Keep the child's visual field as simple as possible. Minimize distracting elements whenever the child is working on a visual or visual-motor task.*

1. Wash the chalkboard often so background for writing is clear. This is important whenever the board is used for demonstration or the child is expected to copy, read from, or write on the board.
2. Assist the child in keeping a clear desk top. Teach child to store out of sight all items that are not required for a task.
3. Consider position of child's desk within the classroom. For some children, sitting in the front row is helpful because it eliminates the view of other children's desks and activities. For more severe difficulty, some children work better in a study carrel or in a separate area with view of the classroom blocked.
4. Eliminate as much of the visually stimulating classroom wall decoration as possible, especially around this child's desk.
5. At home, help the child to prepare a work place that is free of visual distractions.
6. Keep bright and colorful toys and classroom materials out of sight in closed cabinets, preferably made of plain wood or colored in one color.
7. Prepare worksheets that are free of visual clutter.

*Use visual and tactile cues.* Emphasize and direct attention to important visual aspects of tasks.

1. Place a colored place mat, brightly colored rectangle of paper, or rectangle of textured material under the work materials. This is especially helpful when child is working at a table with other children.
2. Use a red marker to darken outlines for activities with line boundaries, such as coloring, maze, or scissor-cutting activities.
3. Writing paper that adds color and tactile cues to lines is helpful for some children.



*Adapt activities.* Show only the object that requires visual attention.

1. Prepare worksheets with only one problem, work item, or sentence per page.
2. Use construction paper or oaktag to make a screen that blocks out all but the word, math problem, or activity that is being worked on. Cut out a square or rectangle; and move the cutout as the child completes activities on the page.
3. When working on puzzles or other visually confusing activities, present one piece at a time. Use construction paper to cover areas not requiring visual attention. Choose activities with minimal visually confusing detail.
4. For writing activities, place a piece of construction paper or oaktag under the line being written, read, or revised; teach child to move the paper down as lines are completed.
5. Teach writing on "writing strips" which contain only the lines used for forming one sequence or sentence of letters.

*Teach child to minimize visual distractions.* Point out to children that this helps their performance. Encourage them to practice these techniques independently and to develop habits such as keeping work area clear, using the easiest kind of paper, and blocking out visual distractions on worksheets.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

**VISUAL PERCEPTION  
Compensatory Strategies**

## **VISUAL RECOGNITION AND VISUALIZATION SKILLS**

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### **Purpose**

To improve ability to recognize and recall shape, letter, and number formations despite weak visual recognition and/or visualization skills

### **Strategies**

1. Consider all sensory modalities when presenting material. If visual information is confusing for the child, emphasize movement and touch when teaching shape, number, and letter forms. Use of plastic tactile alphabet, writing in damp sand with a finger, writing spelling words in paint, or writing with crayon on paper over a textured surface are examples of activities that emphasize touch and movement. Lots of repetition of motor patterns for letters, with eyes closed, is often helpful.
2. Reinforce letter learning auditorily. Combine letter sounds with motor patterns for forming letters. Make the sound and ask child to repeat the sound while making the letter.
3. Encourage verbal description of how letters are formed. Verbal labeling can help child remember especially difficult letters. For example, describe *q* as a "queen bee" or an "a with a queen bee's tail." Draw the letter as a bee with wings, to help child recall a visual image for the letter.
4. Teach cognitive cues that help child recognize letters and numbers and correct formations. For example, some children are unable to visually discriminate *m* from *n* until they are taught that "*m* has two humps, while *n* has only one."
5. Write model letters and numbers on a strip of paper. Tape the strip across the top of child's desk to assist with writing when letters can be recognized but cannot be recalled quickly.
6. If kinesthetic (movement) perception is stronger than visual perception: Teach child to write the letter when unable to visualize how a letter is supposed to look, and to use this strategy when unable to recognize correct letter or number formations visually.
7. If visual information is confusing: Encourage child to write with eyes averted or closed, using primarily kinesthetic information for letter formation. Child then can look at the written work and make spatial corrections, if necessary. Paper with raised lines helps with maintaining letters within the lines.

8. If spelling and learning of sight words is especially difficult: Strategies such as those listed above may help with learning of sight words and spelling words. For example, have child focus on how the movement sequence feels, how the letters sound, and how the word looks; or teach cognitive strategies (mnemonic devices) for remembering the sequence of letters within words.
9. Children with weak visual recognition or visualization skills may be required to attend to cognitive, verbal, and motor strategies for recalling letters, numbers, and words rather than automatically recognizing and visualizing them for writing. This results in slow performance that requires a lot of attention. To enable child to focus as much attention as possible on the content of written assignments (rather than the mechanics of trying to remember the letters), encourage child to write legibly but not to worry about the appearance of the written product. During penmanship or spelling activities, encourage child to check written work for letter formation and to check spelling.
10. Have child use a word processor with a spell-checker. It eliminates the need for fine spatial discriminations involved in letter formation, and corrects words which are misspelled due to weak visualization. Instruction in use of the keyboard and access to a computer should be top priorities for this child's educational program.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

## VISUAL PERCEPTION Compensatory Strategies FORM CONSTANCY

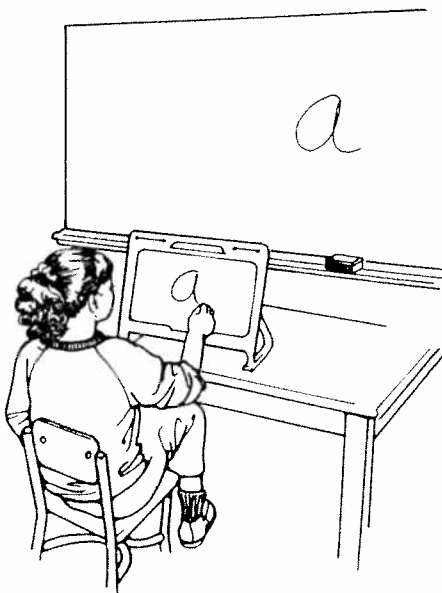
### Purpose

To minimize changes in presentation of letters and numbers so child is able to recognize them more easily

### Strategies

Some children with visual perceptual problems have difficulty remembering letter and number forms when presented from different spatial orientations and when details are added or changed. This can cause difficulty with copying from the chalkboard or writing letters and numbers on the desk surface when they are shown in the upright position. Changes in letter and number type styles also can cause confusion and decrease the child's ability to recognize them. Some examples of ways to minimize spatial and detail changes are:

1. When the class is copying information from the chalkboard, provide this child with a written copy that can be placed on the child's desk. Another alternative is to allow the child to copy the information from another child's paper.
2. Whenever possible, use a type face or writing style for reading or copying which is similar to the writing style the child is being taught.
3. This child may have difficulty making the transition from manuscript to cursive writing. Provide extra time and practice with plenty of repetition of motor patterns used for cursive letters, together with verbal descriptions.
4. When teaching letters and numbers, make sure the child is reading and writing them in the same orientation. For example, demonstrate a letter on the chalkboard and encourage the child to write it on the board also; or demonstrate on the child's desk and have child write on the desk also. An upright desk-top easel enables a child to write in the same orientation as the classroom chalkboard.
5. Teach the child to identify the kinds of tasks that will be difficult and to use strategies to make them easier. For example, if the child has difficulty recognizing letters when presented from different angles, teach the child to shift the head or eye position to make



recognition easier. If copying from the chalkboard, have the child position the head so that the face is parallel to the paper. This enables the child to view letters at the same angle as they are seen on the chalkboard. If the child has difficulty recognizing various type faces, teach the child to verbally analyze important details of letters to aid with recognition.

*Use of these activities should be directed by a qualified therapist.*

Child's Name \_\_\_\_\_

Date \_\_\_\_\_

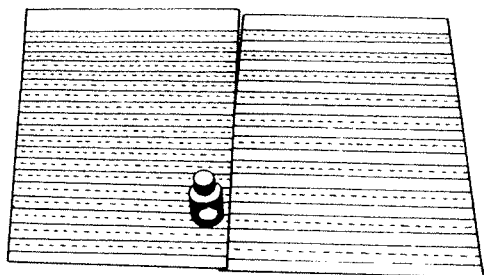
## VISUAL PERCEPTION Compensatory Strategies WRITING PAPER CHOICE

### Purpose

To increase child's ability to use lines for visual guidance when writing

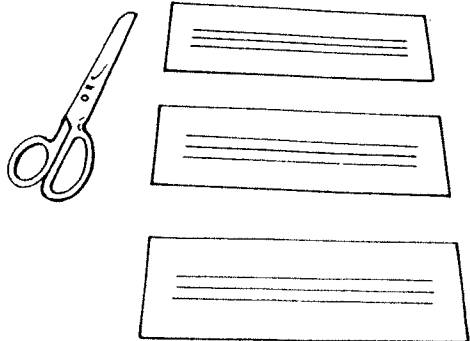
### Strategies

1. The lines on writing paper can be very confusing for children with weak visual perceptual skills. Finding the right paper can make a dramatic difference in handwriting performance. Try a variety of papers; children vary widely in their preferences.
2. Take handwriting samples on a variety of papers, and ask the child how each paper feels. If no difference is seen in handwriting performance (legibility, rhythm, or speed) or in child's comfort level, continue to use the regular classroom paper.
3. It may be confusing for this child to switch paper types. Try to find one which is the most helpful; then use it consistently in all classes and at home. As the child progresses to lines that are closer together, try to use paper that maintains the aspects the child is used to. For example, if the child has been using simplified classroom paper, simplify paper with closer lines in the same manner.



### Paper Types

1. Regular classroom paper can be visually simplified by using typewriter correction fluid to "white out" some lines so lines used for writing are separated by more visible space. This simplified paper can be photocopied for regular classroom and home use. Advantages of this paper include its similarity to the paper used by other children, and its availability. Disadvantages are the labor and cost involved in preparation.
2. Classroom paper can be simplified even further by using correction fluid to erase all but three sets of writing guidelines, each separated by white space. These can be cut apart into writing strips. Child writes on one strip at a time and focuses attention on these lines only. Strips are more difficult to stabilize with the nonwriting hand, but they can be taped to the writing surface, if necessary.
3. Some children are visually confused by paper with a center line (dotted or continuous) and work more easily on paper with two lines, even when first learning letters and numbers. Two-line paper



can be made by using correction fluid to eliminate the middle line on regular classroom paper, then photocopying; or it can be copied (in a variety of widths) from the book, *Handwriting without Tears* (Olsen 1980).

4. For children with spatial confusion, regular paper may be easier to use when visual cues indicate top, bottom, and left-to-right. Emphasize the top writing line and left margin by tracing over with a green marker. This helps the child remember where the letters and the line start. Emphasize the bottom writing line and right margin with a red marker to provide a reminder of where letters and lines stop.
5. Paper with colorful lines, with and without raised or textured lines, provides visual and tactile cues that are helpful for some children. These are available from a number of commercial sources.

### Reference

Olsen, J. Z. 1980. *Handwriting without tears*. Brookfield, IL: Fred Sammons, Inc.

*Use of these activities should be directed by a qualified therapist.*



Child's Name \_\_\_\_\_

Date \_\_\_\_\_

**VISUAL PERCEPTION  
Compensatory Strategies**

**VISUAL SPATIAL CONFUSION**

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**Purpose**

To decrease spatial confusion during fine motor activities

**Strategies**

1. If puzzles and games are difficult due to visual confusion, focus the child on touching and moving the pieces within the hand and placing them by how they feel, rather than focusing primarily on how they look. This also can help with activities that involve sorting and matching.
2. Graph paper can help with spacing of letters or math problems. For arranging numbers in columns for math activities, have child turn lined writing paper on its side to assist with lining numbers up vertically.
3. Paper with raised lines (embossed or textured) decreases visual demands and helps some children to feel boundaries for letter and number writing.
4. Visual cues can help children to organize placement of letters on the line and on the page. Examples include placing a star in the upper left-hand corner of the page to indicate where writing starts, or smiley faces at the left side of each line to help the child recognize the left-to-right direction for writing.
5. If cutting on the line with scissors is difficult, tactile cues can decrease the visual demands and make the activity easier. Place white glue along the outside edge of the shape to be cut. When the glue dries, the child can feel the difference when cutting "off the line" and can correct immediately.
6. If visual information is very confusing, encourage child to write with eyes averted or closed. Paper with raised lines can help with maintaining letters within the lines.

*Use of these activities should be directed by a qualified therapist.*