# What? Why? and How?

Series 4 - Visual Skills

Visual Discrimination Figure Ground Form Constancy Visual Closure Visual Memory Visual Sequential Memory Visual Spatial Relationships Visual Motor Visual Tracking Skills Visual Focus

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### Visual Discrimination

#### What is visual discrimination?

Visual discrimination is the ability to recognize similarities and differences between shapes, size, colors, objects and patterns.

## Why is visual discrimination important?

The ability to determine differences and similarities between objects helps us to understand and interpret the environment around us. Visual discrimination is especially important to learn how to read and write.



#### How can you help a child develop visual discrimination skills?

Children need adequate visual discrimination skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).

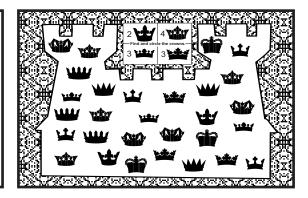
Here are activity ideas that will help a child to develop visual discrimination skills:

- start with the basics such as sorting for one attribute (i.e. sort cube blocks by color, sort same size beads by color, sort wooden blocks by size, etc.)
- progress to sorting objects with two attributes (i.e. sort different sized blocks by color, sort pens and pencils, sort objects by shape and color, etc.)
- finally advance to sorting objects of many different attributes (i.e. classify by size, color and shape, determine differences between letters and numbers)
- gather similar objects from around the house such as a yellow crayon, banana and a pen. Ask the child which object does not belong? The answer is the pen since it is not yellow.
- sort objects from around the house (i.e. LEGOs by color, size or type, silverware, playing cards, etc.)
- match up pictures that are the same (i.e. matching games, memory games)
- complete "find the difference" puzzles
- complete puzzles starting with simple one piece puzzles and progressing to larger puzzles
- using a newspaper or magazine, ask the child to go through an article and only circle certain letters or words (i.e. "the")
- match up parquetry blocks to pattern boards
- play dominoes
- sort coins
- play lotto or bingo with picture cards
- complete letter, number or word searches

## Figure Ground Perception

#### What is figure ground perception?

Figure ground perception is the ability to filter visual information that is not important so that you can focus on the relevant visual information. This allows us to find the detailed visual information even when it is part of a busy background. For example, you use figure ground perception when you are reading a flyer on a busy bulletin board.



#### Why is it important?

Visual figure ground perception allows us to pick up on details while ignoring extraneous visual information. It is necessary for literacy skills, math skills, activities of daily living and the ability to maintain attention. If you have difficulties with figure ground discrimination you may find it difficult to find important words in text, copy words from the front of the room, read specific information on the board in the front of the room, maintain your visual attention for long periods of time, find objects in a particular place (ie keys in a pocketbook or pencil in a pouch), pick out numbers in word problems, etc.

#### How can you help a child develop figure ground perception?

Children need adequate visual figure ground perceptual skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor). If your child is having trouble with figure ground skills try to reduce extraneous visual stimuli, teach organizational skills, use highlighters to emphasize important points or cover up parts of worksheets to only show the material that needs to be completed.

Here are some activity ideas that will help a child develop visual figure ground perceptual skills:

- play "I See Something". Describe an object you see in a room (i.e. I see something red and round). The
  child has to visual scan the room to find the red ball you saw in the toy box.
- make "I Spy" games. Put some dried beans or rice in a container. Hide small objects in the bin. The child has to hunt and find the small objects.
- create sorting tasks. Ask the child to find only the pennies in a large container of coins, find only the blue beads in a container of mixed color beads, etc.
- complete Hidden Picture type puzzles. Find and circle pictures that are hidden inside a larger picture.
- play pick up sticks, matching games, Bingo, etc.
- try a color by number activity.
- complete word find puzzles and jigsaw puzzles.
- scan and find only certain words in written text (i.e. find only words that start with the letter 'B' in a newspaper article).

## Form Constancy

#### What is form constancy?

Form constancy is a visual perceptual skill that allows you to understand that a form, shape, object stays the same even when it changes it size, position or is in a different environment.

For example, when you see the letter 'A' it is always the letter 'A' whether in a word, in bigger text or different font - CAT, CAT or CAT.

#### Why is it important?

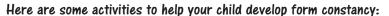
Form constancy is necessary to determine changes in size, shape and orientation and to establish that forms are the same in different environments. This skill is needed to understand that letters, words and numbers remain the same whether in a book, magazine, on a big sign or in a different text or font. It helps us to categorize and sort objects, organize materials, label items and predict characteristics of an object. Children who have problems with form constancy may frequently reverse letters and/or numbers.

## How can you help form constancy develop?

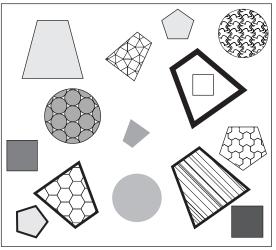
Children need adequate form constancy perceptual skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough visual examination by an optometrist or an ophthalmologist (medical doctor).

If your child has difficulties with form constancy try a kinesthetic approach to teaching new material by allowing your child to touch, move and manipulate objects. Use

vocabulary to help describe an object's shape, size or position.



- complete simple puzzles progressing to more difficult puzzle shapes
- use shape sorters
- play games that require you to match the same shape, letter or number (i.e. Perfection)
- · complete matching worksheets or "find the odd one out" worksheets
- place different sized shapes in a bag. Ask the child to reach in the bag without looking and find a small square block or a large rectangle block.
- discuss different shapes, letters or numbers that you see in the environment around you
- go on a scavenger hunt to find 10 circles outside or 10 letter 'A's at the mall
- match pictures to real life objects (i.e. picture of lollipop + real coin = both are circles).



### Visual Closure

#### What is visual closure?

Visual closure is a visual perceptual skill that allows you to know what an object is even when the object is only partially visible. For example, if your sock is sticking out from under your bed you recognize it is your missing sock. Another example, is reading words together instead of every letter at a time.

#### Why is it important?

Visual closure is necessary to quickly view objects and mentally determine what they are before we see the entire object. It is required for reading quickly, reading fluently and predicting differences in similar words. It is also needed for activities of daily living (i.e. finding lost objects that are partially hidden).

#### How can you help a child develop visual closure skills?

Children need adequate visual closure perceptual skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).

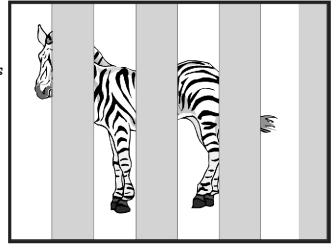
If your child has difficulties with visual closure skills try using a multi-sensory approach to learning new material (i.e. allow the child to touch, move and manipulate objects to better visually understand the information).

Here are some activities to help a child develop visual closure skills:

- partially hide objects or toys and ask the child what is hiding without revealing the entire object
- · cover up parts of a picture and see if the child can guess what the image is
- play "Find the Object": pick any small object in your house such as a clothes pin. Have the child close
  eyes. Hide the clothes pin in the room with a part of the clothes pin showing. The child has to find the

hidden clothes pin. At first play in a very uncluttered room and progress to a room that is very busy to see if the child can still find the clothes pin.

- complete Dot to Dot puzzles or jigsaw puzzles
- find a simple picture in a magazine and fold it in half. Glue it on a piece of paper. See if the child can finish drawing the other side of the picture. For example, see if the child could draw in the missing sections of this zebra picture.
- take close up pictures of objects and see if your child can recognize what the object is.



## Visual Memory

#### What is it?

Visual memory is the ability to immediately recall what the eye has seen. This skill allows us to remember what a shape, symbol, object or form looked like which is crucial for learning and activities of daily living.

#### Why is visual memory important?

The ability to remember what we see is important to process short term memory into long term memory. Visual memory is necessary for most academic tasks such as reading, spelling, reading comprehension, science, math, copying from the board, etc. To complete activities of daily living you also need visual memory to recall where your clothes are or what objects to use to brush your teeth.

## How can you help a child develop visual memory skills?

Children need adequate visual memory to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).





If your child is having difficulties with visual memory skills try some of these techniques: provide visual cues to help facilitate information recall, read directions out loud to the child, keep visual information clear, uncluttered and concise. Use a kinesthetic approach to teaching new material (ask the child to do an activity with his/her own hands or body rather than just look at visual or written directions).

Here are some fun activities you can do to encourage the development of visual memory skills:

- play simple matching games with cards that obviously match (i.e. matching various shapes versus matching cards of all different types of candy). Start with less cards to match and progress to the entire deck.
- look at a picture together and talk about what you see. Cover up the picture and see if the child can report the details in the picture. Start with a simple picture progressing to a very busy picture.
- play the What's Missing? game place several objects on a tray. Let the child look at the objects for a
  minute. The child should close eyes. Remove one object. The child opens eyes and determines what
  item is missing.
- play the Memory Game place several objects on a tray. Let the child look at the objects for 1-2
  minutes. Cover the objects up with a towel. See how many objects the child can remember from the
  tray without looking.

## Visual Sequential Memory

#### What is it?

Visual sequential memory is the ability to remember and recall a sequence of objects and/or events in the correct order.

#### Why is visual sequential memory important?

The ability to remember what order in which we see objects is crucial when learning the basics of literacy and math. Visual sequential memory is necessary for most academic tasks such as reading, spelling, reading comprehension, science, math, copying from the board, writing letters in the correct form, etc. To complete activities of daily living you also need visual sequential memory to recall what steps you need to complete when brushing your teeth or getting dressed (i.e. you put toothpaste on before you brush or you put your underwear on before you put your pants on).

#### How can you help a child develop visual sequential memory?

Children need adequate visual sequential memory to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).

If your child is having difficulties with visual sequential memory skills try some of these techniques: provide visual cues to help facilitate information recall (i.e. step by step sequence cards describing the task), provide auditory input along with visual input (i.e. the child says the order of the spelling word out loud and writes the word down), keep visual information clear, uncluttered and concise and use a kinesthetic approach to teaching new material (ask the child to do an activity with his/her own hands or body rather than just look at visual or written directions).

Here are some fun activities to encourage visual sequential memory:

- make patterns with beads, small toys or household objects. Have child copy the pattern.
- create movement patterns for the child to copy such as clap hands 2x, jump up 3x and spin 1x. Can the child recall and perform the patterns in the correct order?
- cut up simple comic strips. Can the child put them back in the correct sequence?
- play charades acting out everyday routines (i.e. all the steps required to brush your teeth or to make a sandwich).
- hide magnet letters around the room. The child needs to find the letters and put them in alphabetical order.
- place several items on a tray in order, cover it up and mix the items up. Can the child remember to put them in the correct order?
- Play store bought memory games like Simon<sup>™</sup>,
   Mastermind<sup>™</sup> or Loopz<sup>™</sup>.



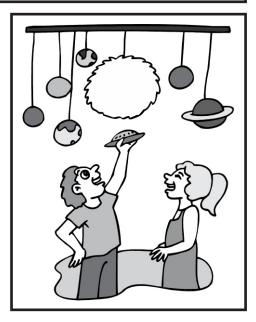
## Visual Spatial Relationships

#### What is it?

Visual spatial relationship is the ability to visually perceive two or more objects in relation to each other and to yourself.

## Why are visual spatial relationships important?

The ability to determine spatial relationships is important in everyday tasks. You need to interpret what it means to "stand first in a line", "sit in front of Johnny" or "put the pencil on top of the paper". If you have difficulty perceiving spatial relationships it can effect your motor skills, body awareness, problem solving, activities of daily living and your overall performance in school.



#### How can you help a child develop visual spatial relationship skills?

Children need adequate visual spatial skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).

If your child has difficulties with visual spatial relationships try: breaking down complex skills or activities into smaller parts (i.e. for a multi step project only provide the student with directions for one step at a time), use a multi-sensory approach to teaching concepts (i.e. let the child move under, over, in between to understand the concepts), keep the classroom or home environment the same (i.e. do not move around furniture) and keep school supplies the same (i.e. let the child keep his/her own supplies and not share).

Here are activity ideas that will help a child to develop visual spatial relationships:

- play any movement activities such as obstacle courses or using playground equipment so that the child
  has to move under, over, in between, left, right, through, next to, high or low to help the child learn
  the relationship of the body to objects.
- play movement games with boundaries such as tag, hopscotch, hula hoop games and more.
- complete chores such as setting the table, dusting or sweeping where child has to move around objects.
- play with building type toys such as wooden blocks, interlocking blocks and railroad tracks.
- complete projects such as model cars or various craft kits where you have to follow directions such as glue this circle to the yellow square.
- practice copying pictures from paper then increase the challenge by copying a picture from far away
- play board games that require you to move your pieces in certain directions such as checkers or chess
- complete multi-step craft activities such as origami.

## Visual Motor Integration

#### What is it?

Visual motor integration is the ability to interpret visual information and respond with a motor action. For example, you see a baseball and you respond by moving your hands to catch the baseball.

#### Why is it important?

Visual motor integration is crucial for coordination activities. If visually presented information is not perceived correctly, the muscles will get incorrect messages resulting in an inappropriate motor response.

Children who have deficits in visual motor integration may exhibit problems with participating in sports, eye hand coordination skills, eye foot coordination skills, bilateral coordination (combining both sides of the body together), body awareness, activities of daily living (i.e. getting food on a fork), copying visual information, drawing, handwriting, lining up math problems, geometry, speed of complete motor tasks, etc.

#### How can you help with visual motor integration?

Children need adequate visual spatial skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).

If your child has difficulties with visual motor integration skills try the following: practice coordination tasks repeatedly, keep worksheets clear, uncluttered and concise, cover up all the problems except the one that is being worked on, highlight or darken important information, use a multisensory approach (i.e. activities that require using more than just the visual system such as creating a video presentation instead of handwritten assignment), let a child give an answer orally instead of written, reduce the amount of materials that need to be copied from the board, provide copies of class notes to the child, and focus on the quality of the work rather than the quantity.



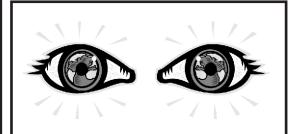
Here are some activities that encourage visual motor integration:

- practice, practice, practice balls skills catching, throwing, kicking and hitting. Start with large balls and slower speed progressing to smaller balls and faster speed.
- practice large movements to form letters and numbers (i.e. air writing forming the letters large in the air using your whole arm and hand).
- use stencils, dot to dot puzzles, mazes and coloring books (emphasizing coloring in the lines)
- practice lacing activities string beads, simple sewing projects and lacing cards
- copy designs using wooden blocks, interlocking blocks, peg boards, etc.
- play movement games that encourage right/left discrimination, avoiding obstacles, stopping/starting, etc.

## Visual Tracking

#### What is it?

Visual tracking is the ability to control the eye movements using the oculomotor system (vision and eye muscles working together). There are two types of visual tracking: maintaining your focus on a moving object and switching your focus between two objects.



#### Why is it important?

Visual tracking is necessary to follow an object moving in space and to follow stationary objects. It is a key component to fluid reading, coordination tasks, body awareness and postural control. Visual tracking allows you to know what you are looking at and where to look.

For reading, your eyes move along written text by fixating on a word and then making a small jump to the next word. If you do not have smooth visual tracking, then you may: skip words, skip lines, move your head too much when reading, use your finger to keep your place when reading, have trouble comprehending what you read or be unable to catch, throw, hit or kick a ball with accuracy.

#### How can you help develop visual tracking skills?

Children need adequate visual tracking skills to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).

If your child has difficulties with visual tracking try some of the following ideas when reading or writing: take visual breaks at times, use larger print text, provide materials to be copied at the desk rather than from off the board, read or write on a slant board and use highlighters to help maintain place in text. For coordination tasks, try: using a larger ball or balloon to practice catching, use a brightly colored ball or throw with a slower speed.

Here are some activities to help develop visual tracking skills:

- play any games that involve catching or hitting a ball. Practice throwing a ball at a target. Practice over and over again.
- play flashlight tracking games go into a dark room and follow the flashlight on the wall. Hang letters or words on the wall. See if the child can find them using the flashlight in a dark room.
- · complete letter finds, word finds or hidden pictures puzzles to visually scan and find objects on a page
- go on scavenger hunts find and circle all the words that start with 't' in a newspaper article, look for objects while you are moving in a car or on a swing.
- progress to having your child visually track objects while the child is also moving. Throw a ball to the child while they are running. Try throwing your child a ball to catch when they go down a slide.

### Visual Focus

#### What is it?

Visual focus is the ability to see objects clearly, especially up close. The ability to focus is sometimes referred to as accommodation. When we look at objects, the lens of the eye needs to change shape to bring the object into focus.

#### Why is it important?

Visual focus is especially important during reading and writing. We need to maintain our focus on the print to keep the text clear. If you do not have sufficient visual focus, then you may experience blurry text, get headaches when reading, eye fatigue and have difficulties copying from the board.

## How can you help to develop visual focus?

Children need adequate visual focus or accommodation to function properly in school and at home. If you have concerns about your child's visual skills, be sure to start out by having your child undergo a thorough vision examination by an optometrist or an ophthalmologist (medical doctor).



If your child has difficulties with visual focus try some of the following ideas when reading or writing: provide text with clear contrast between the text and the background (ie black text on white paper), sit close to the board or provide a copy of the material at the child's desk, provide larger print, prevent eye fatigue by taking breaks and use audio recordings if necessary.

Here are some ideas to help a child develop visual focus:

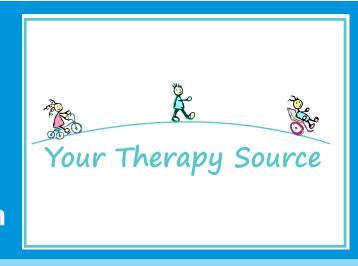
- practice looking at an object close up and the switching your focus to an object farther away. Continue
  moving back and forth to the near and far objects. Make sure the objects come into focus after each
  switch. For example, make matching cards with the same set of words. Place one set on the wall
  around the room. Have the child read one card up close and find the matching word on the wall.
- complete hidden picture puzzles, dot to dot puzzles and regular puzzles
- try higher level motor skills while encouraging visual focus adult holds up a certain number of fingers while child is dribbling a basketball, the child announces the number of fingers the adult is holding up, hold up sight words while the child walks across a balance beam, etc.
- practice throwing, catching, hitting and kicking skills child will have to focus on the ball from far away and close up.
- practice throwing a ball up and catching it by yourself. Try walking around obstacles while catching and tossing ball to yourself at the same time.

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