

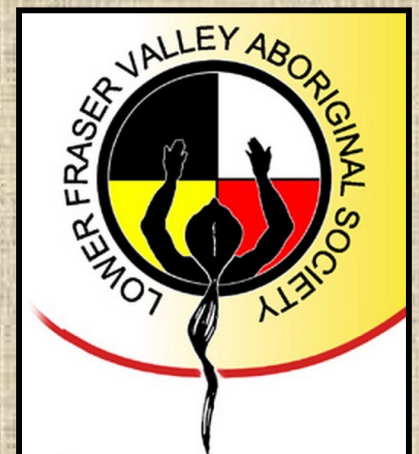
Getting Ready for Kindergarten

My Occupational Therapy Perspective



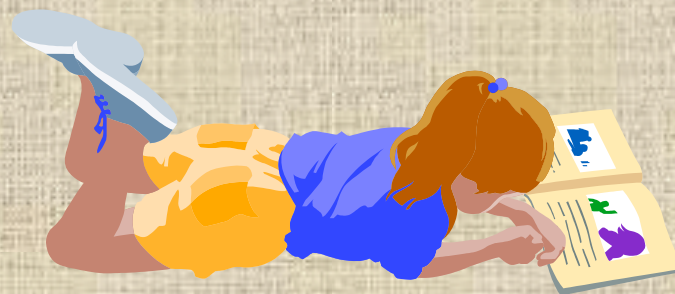
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Presented on
Mar 25, 2017 for:



Agenda

- Make it Fun!
- General Development
- Fine Motor Development
- Development of Grasps & Strokes
- Problems & Solutions
- Fine Motor: Red Flags
- Prerequisites to writing
- Printing-General Teaching Principles
- Cutting

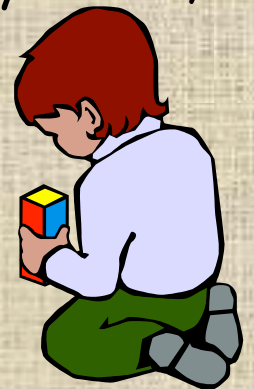
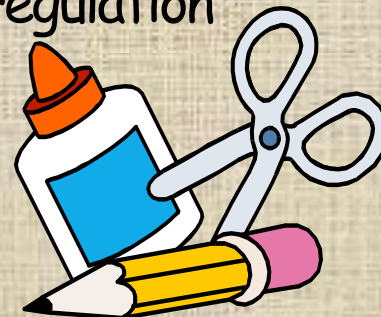
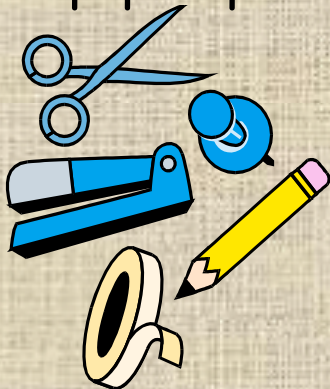


Make it FUN!! PLAY is RESEARCH!

- ✓ With children, play is the way we to promote development and independence in learning and doing.
- ✓ Natural Engagement (less directed) builds automatic foundational skills (strength/posture/refined movement patterns)
- ✓ Wider Brain Activation comes with fun/interest

Major Areas: fine motor manipulation, posture, strength, visual-motor, paper/pencil, organization and attention, self care, and sensory-motor,

self regulation



Make it FUN!! PLAY is RESEARCH!

★ PRAISE PARTICIPATION

★ PRAISE IMPROVEMENT

★ SHOW PLEASURE

★ NO FOCUS ON PRODUCT

★ NO FOCUS ON PERFORMANCE

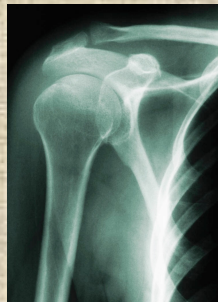
★ MODEL PRIDE IN

INDEPENDENT PERFORMANCE

General Development

top to bottom or "cephalo-caudal"
midline to periphery or "proximal-distal"

Trunk → Shoulder → Elbow → Wrist → Hand



Fine Motor Development

Whole Palm Grasp → Refined Finger Pinch



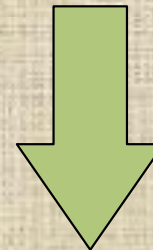
Lateral "Power" Side → Medial "Precision" Side
ulnar or pinkie side radial or thumb side

Fine Motor Development

Bilateral Coordination

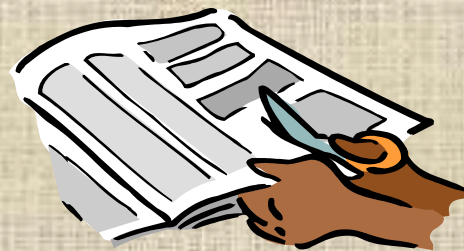
1. Hands Perform Same Action

(symmetry)



2. Hands Coordinate in "Do and Assist"

(asymmetry)



Build Foundation Skills First

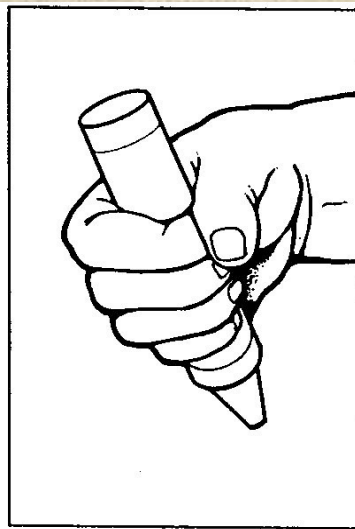
A child is ready for printing when he/she is able to:

1. balance without the use of hands,
2. engage in constructive play,
3. understand up, down, start, stop, big, little, and follow simple spatial directions in 3-D,
4. sit and work for a few minutes at a time,
5. draw and colour beyond scribbling
(including counter-clockwise circular strokes)
6. hold a pencil in a writing position.



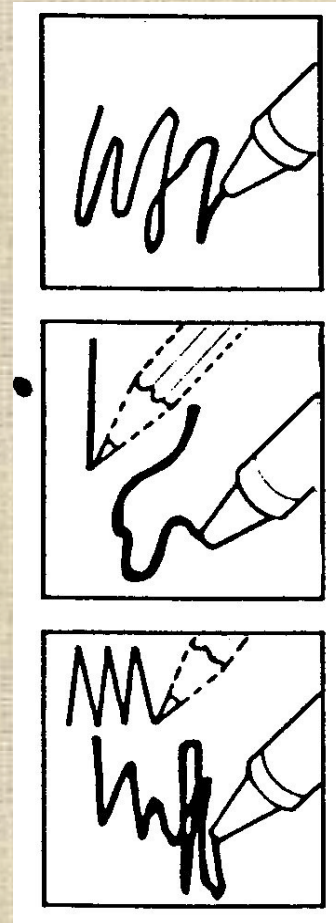
Development of Grasps & Strokes

1 - 1 ½ years



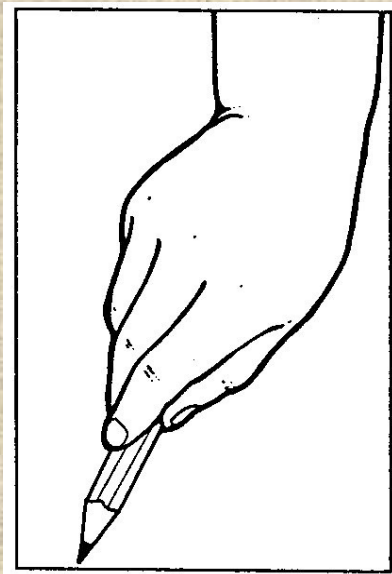
Fisted
Grasp

- Imitating scribbles & strokes
- Spontaneous scribbling
- Whole arm moves as a unit
- Flexed wrist



Development of Grasps & Strokes

2-3 years

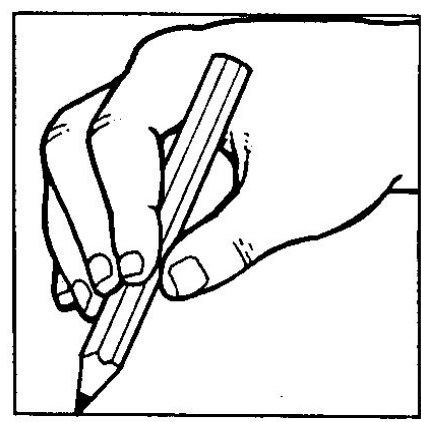


Digital
grasp

- Copying | — ○
- Utensil stabilized in palm and moves toward index finger
- Hand and forearm move as a unit
- More refined movement from elbow
- Wrist less rigid

Development of Grasps & Strokes

3 ½ - 4 years



Emerging
tripod grasp

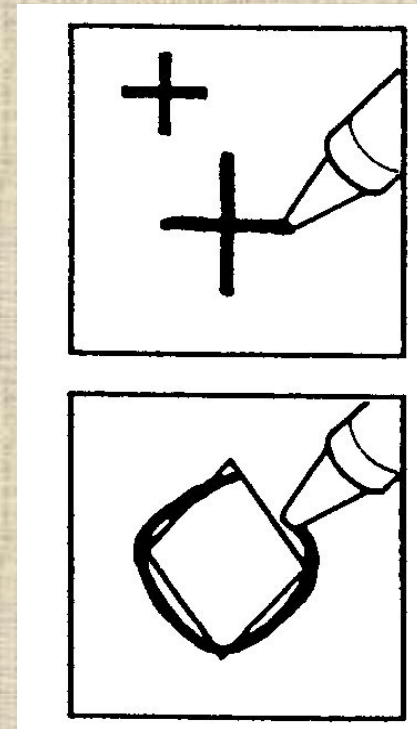
- Copying cross

- Tracing diamond with rounded corners

- Movement coming from wrist

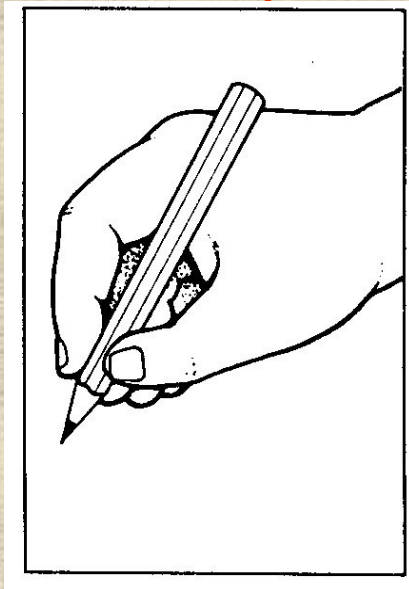
- Hand functions as a separate unit from the forearm/mobile wrist

- "Web space" between thumb and index opens up



Development of Grasps & Strokes

4 $\frac{1}{2}$ - 6 years



Tripod grasp

- Copying square, triangle, diamond

- Child begins to separate finger movements from hand/wrist movements

- Wrist moves into raised angle (extension) for increased stability

(writing on slantboard or easel strengthens this)

- More controlled directional changes

- Thumb controls movement



Problems and Solutions in Fine Motor Development

Experience

Behaviour

Visual Regard / Attention

Posture

Bilateral Hand Skills

Grasp/Dominance

Hand/Finger Dexterity

Eye-Hand Coordination/Visual-Motor Control

Experience

Daily experience is what allows us to develop. Our abilities and skills are affected by experience or lack of experience.

You may notice:

- Lack of interest in environment
- Easily overstimulated
- Seeks isolation/avoids others
- Chooses passive activities
- Poorly defined "mushy" muscles, especially hands
- Complicated medical conditions
- Poor social/family history
- Documentation of neglect/abuse/deprivation

You may try:

- Gradually more stimulating environments
- A withdrawn child might watch other children at play from a gradually decreasing distance.
- Providing deep and firm pressure during play
- Encourage free exploration with hands. Try to vary objects, textures, temperatures, roughness, density.
- Increase touch gradually to include different textures.
- Gradually increase other sensory factors as well, i.e. light, color, sound, etc.

Behaviour

You may notice:

- Very excitable
- Can't sit still
- Hears everything in the room
- Lack of attention to detail



You may try:

- Explore sensory play
- Use calming factors: low voice, slow movements, organize environment, decrease distractions
- Relaxing music
- Dim lights
- Place hands firmly on shoulders with pressure and use Heavy Work options
- Muscle relaxation, deep breathing
- Read a book in a bean bag chair
- Lean forward on desk with palms on table and bear weight through arms.
- Press palms together
- Place palms over child's and press firmly
- model and reinforce sharing
- Analyze what is distracting and how to decrease its influence
- Provide more movement/dynamic seating

Behaviour

Structure & Routines


You may notice:

- Impulsive behaviour
- Resistance at transitions
- Rigid play skills
- "Bossy" in play

You may try:

- Use visual schedules. Review as needed
- minimize use of language
- Give several warnings for transitions
- Make warnings visual and verbal
- Visual timers (time timer/sand timer)
- Try giving the child a special job to do before or during transition
- Allow child to observe first, especially when narrated.
- Minimize environmental distractions during learning

2 Apps in This Bundle



Choiceworks
Education

+ Download ▾

Choiceworks
Calendar
Education

Download ▾

Visual Regard / Attention

You may notice:

- Looks around room while working
- Coordinated but poor quality work
- Hears everything in the room
- Lack of attention to detail

You may try:

- Look at all the suggestions under "behaviour"
- Add sandpaper under colouring
- Engage in deep pressure/tactile/proprioception before fine motor
(wheelbarrel walking, hand squeezes, chair sit ups)
- Try shaving cream drawing or play doh before fine motor
- Use bean or rice bins, water and sand play before fine motor, sensory treasure chest
- Brainstorm ways to increase sensory feedback to hands
- Do hand shakes, hand clapping
- Place fine motor work on slant board or easel when possible. (Also supports wrist extension.)
- Have child face away from action
- Use colouring masks made with card stock.
- use music and nature sounds



Posture

You might see:	You might try:
Feet don't touch the floor	<ul style="list-style-type: none"> • telephone books • a footstool
Leans too close to the desk, hunched shoulders, slumped in chair	<ul style="list-style-type: none"> • stretches • sloped desk top • use a slant board
Holding onto edge of seat with non-writing hand.	<ul style="list-style-type: none"> • encourage two hands on the table when writing, stickers or numbers on the hands can act as reminders.
Chair too far from the desk	<ul style="list-style-type: none"> • chair attached to desk • stickers or tape on the floor to indicate where the chair should be • move work from edge of table
Slouching over table, seem tired	<ul style="list-style-type: none"> • need more movement/dynamic seating/alerting input



Heel contact with the floor allows for weight shifting as the hand moves across the paper.

Good Pelvis and trunk stability is necessary for hand coordination and grasp to develop.

Bilateral Hand Skills

You might see:

- unilateral work
- midline problems
- switching hands

You might try:

- Transfer objects from hand to hand.
- *Catch and/or bounce a ball with both hands, or rolling it between people.*
- Batting a ball, holding the bat with both hands. You can use a batting tee, or you can hang a ball from the ceiling or a tree. Use a regular ball/bat, 'wiffle ball', or 'Nerf' type.
- *Cut play dough with a butter knife, then use child scissors.*
- Cut flattened straws, cardboard or oaktag strips. Try using large nail clippers, then use child scissors.
- *Cut a straight line across a 2" wide paper strip, holding the paper in one hand, cutting with the other.*
- Cut out various shapes, where both hands work together in cutting. Glue the shapes on paper to create a picture or design.
- *Build a tower etc. with blocks, alternating use of right and left hands.*
- Separate or put together 'pop beads'.
- *String beads. You can use a regular shoe lace, or wrap tape around the end of a lace or piece of string to provide a long stiff tip to fit through beads. Or try plastic lace (gimp) from Tandy or Michaels.*
- Lace shoes or cards with designs/pictures outlined with punched holes. The child can punch the holes, too, using a punch, push pin, or nail.
- *Start a work board where the child can practice nailing into soft wood.*
- Play construction games (Legos, Lincoln logs, etc.). Cut and paste activities are also good.
- *Play with water or sand. Use scoops or cups to fill containers and pour or build.*
- Play floor hockey or street hockey. Try it with a ball and plastic bats or brooms.
- *Play 'Simon says' or learn and perform a clapping pattern. Let the child lead too!*
- Play 'hot potato'.
- *Have the child mix batter while using the other hand to turn the bowl.*
- Use a rolling pin.
- *Perform jumping jacks and similar coordinated movements.*

Hand Dominance

- Having a dominant hand allows one side to develop greater precision and speed while the other side builds more strength and stability.
- Dominance usually established by 12 months, but may emerge later.
- Child usually starts activity with dominant hand when working at midline.
- Child is usually faster on dominant side.
- Child often has more mature or more precise grasp in dominant hand.
- Once you know dominance, discourage hand switching.

GRASP

Children should be encouraged to manually explore all aspects of their environment. The development of manipulative grasps can be enhanced through a variety of activities involving reaching with the arms, grasping with the fingers, and manipulating in/between hands. It is important for children to develop their skills in terms of general manipulation and with tools. Coloring and drawing are great activities for kids in terms of grasps necessary for writing. Drawing in the sand, snow, or mud are great, as is drawing with sidewalk chalk, or on an easel with paints. **Small pieces of crayon actually encourage a strong and neat fingertip pinch. Paint with cut Q-tips or cotton balls.**

You might see:	You might try:
Lack of accuracy	<ul style="list-style-type: none">• rest forearms on table for stability• lean forward increasing weight through forearms• be sure materials are not too close or too far away
Poor isolation of fingers	<ul style="list-style-type: none">• hold items in space to encourage fingertip grasp• stand items up on end, stick in putty
Awkward reach and manipulation accompanied by poor posture	<ul style="list-style-type: none">• try alternative postures: prone, standing, kneeling
Poor wrist stability	<ul style="list-style-type: none">• wrist support, try a different arm/forearm posture
Generally weak grasp patterns	<ul style="list-style-type: none">• provide ample opportunities for manual play, including fun and developmentally appropriate activities (see Building Readiness)

Hand/Finger Dexterity

You may see:

- Larger, less refined movements
- Immature or awkward movements
- Fidgeting
- Dropping
- Increased frustration with building and copying tasks
- Difficult with smaller more refined movement
- Child can't color well between lines
- Child cannot copy shapes or pictures
- Teach colouring in small circles. Model all directions as well as turning paper.
- Colour with small bits of crayons. Use wikki-stix or raised glue borders to encourage targeting
- Save money! Use a bank or decorate a coffee can with a small slot in the plastic cover. Open to count every now and then, then see who can insert the coins fastest. Line up the coins on a table and have the child flip them to all heads or all tails. Challenge the child to pick them all up in one hand, one at a time, holding them in the palm without dropping any.
- Practice turning a wind up toy. Try the large 'key' then the small 'knob' types.
- Play with finger puppets. Have the child wear different puppets on different fingers of the dominant hand and make the puppets interact.
- Modify the above by using a dab of different color paint on each fingertip. Have the child make certain colors meet, do circles, play 'Simon says' etc. Or repeat tapping sequences with those fingers. Or name a color and have the child extend only that finger and wiggle it.
- Operate a squirt bottle or water pistol.
- Practice spelling the alphabet in sign language. The library has books which contain the alphabet...learn together to form a code!
- Use modeling clay, silly putty, play-dough, etc. Use cookie cutters to make objects or shapes. Roll it out, poke holes in it with fingers, pinch it, pull it, twist it, etc. Roll it into a snake, then use it to form shapes, letters, pictures, etc. Hide small objects/coins in a ball of it and have the child find it.
- Roll putty or dough into small balls, using one hand, to make beads.
- Practice having the child hold 3-5 paper cups in one hand, using a finger in each cup. Start out empty, then half full, then full. Have a race with filled cups!
- Use small stamps and stamp pads to create patterns, cards, pictures, etc.
- Tear small pieces of tissue paper, then roll each piece into a ball using thumb and index finger. Make a picture and glue the little balls in place for 3-D art.
- Turn over checkers, cards, or coins, without sliding them to the edge of the table.

APP STORE - Dexteria, Bugs & Buttons, Crayola Apps

Eye-Hand Coordination or Visual-Motor Control

You may see:

- Larger, less refined movements
- Fidgeting
- Increased frustration with building and copying tasks
- Difficult with smaller more refined movement
- Immature or awkward movements
- Dropping
- Child can't color well between lines
- Child cannot copy shapes or pictures

You might try:

- Play bean bag games and practice tossing from right to left hands.
- Use 'hidden pictures', mazes, dot-to-dots, "what's wrong with this picture". Many childrens' activity books contain these activities with motivating themes.
- Construct a design with blocks, pegs, etc. Have the child copy the same design.
- Copy a design on 'Lite brite'.
- Play card games or matching games.
- Video games are good for control, finger speed, and directionality.
- Sort cards or small objects, beads, nuts and bolts, etc.
- Play 'flashlight tag'. Using 2 or more flashlights (1 per person), have the child follow the beam of light .
- move objects in or out of a container. This can be helpful in cleaning, cooking, sorting buttons, hardware, etc.
- Stack blocks, rings, containers, etc.
- Place pegs in a pegboard, free form or to copy a design.
- Screwing nuts onto stationary bolts.
- Dialing a telephone (with supervision).
- Use erector sets and other toys you build with.
- Lacing cards, or lacing string through holes punched in cardboard.
- Bounce and catch a ball. Start with a larger ball and work smaller. At first, have the child bounce the ball in front of him/herself and catch with 2 hands. Go to 1 hand catching or bouncing the ball between 2 or more people.
- Try balloon games. Play volleyball, catch, 'keep away' or 'don't let it hit the ground'. Try a tiny bit of flour inside
- Have an egg and spoon race.
- Tie a magnet to a piece of string and fish for small objects on a plate, on the floor, etc.
- Play a 'nesting' game to fit graded measuring cups or spoons inside one another.

APP STORE - Balloon Darts, PictureD2D, My First Maze

Readiness for Writing - More Visual-Motor

The following activities are intended to build pre-writing skills. These involve fine motor control, eye-hand coordination, and spatial perceptual skills as well, but are geared more to develop the grasp, concepts, and patterns used in writing.

- Trace designs with pencil/marker.
- Copy designs with pencil/marker. This can lead to basic DIRECTED DRAWING.
- Working left to right on large piece of paper, create a flowing design (waves, zig-zag) and have the child try to trace along the path.
- Do rainbow writing. Draw a word, letter, shape or picture. Have the child trace it with one color, then another, then another, etc. This is a great way to help a child remember a shape, letter, word, or name.
- Finger paint.
- Form shapes, letters, and numbers, using a stick in the sand, mud, etc. Also try sidewalk chalk.
- Use a paintbrush with plain water to paint a design on the road, sidewalk, brick wall, or the house.
- Use your fingers to make shapes, letters, and numbers on a surface covered with shaving cream, pudding, finger paint, sand or mud.
- Use a wand with a streamer or ribbon at the end to form shapes etc. in the air.
- Coloring is great. Some books are very easy and some are very hard.
- Again, dot-to-dots, mazes, etc. are great.
- Use beans, rice, acorns, seeds, etc. to draw and fill in a picture, using glue.
- Magna Doodle or Etch-A-Sketch are good pre-writing fun.
- Practice using stencils. There are the kind you trace on the outside and easier ones that you trace along the inside of a cut out.
- Paint, color, draw on paper taped to a wall or on an easel. Good for arm/shoulder/trunk strength.
- Paint a design on a piece of wood or a rock.

APP STORE - Drawing for Kids, How To Draw

RECIPES FOR FUN!

PLAY-DOUGH

Mix 3 cups water and food coloring in a bowl. In a separate bowl, mix 3 cups flour, 1.5 cups salt, and 2 tablespoons cream of tartar. To this mix, add 6 tablespoons of oil or crisco. Now mix the contents of the 2 bowls together. Cook over medium heat until mixture reaches the consistency of mashed potatoes. Let cool and knead with hands. Store in airtight bag or container. Will keep longer if refrigerated after use.

TEXTURED FINGERPAINTS

Add rice or sand to fingerpaints or thick paint to provide extra texture and tactile input. Or mix 1 cup laundry starch, one cup cold water, and 3 cups of soap flakes.

BAKER'S CLAY

4 cups flour 1.5 cups water 1 cup salt

Mix and knead ingredients. If it's too stiff, add more water. Shape into whatever you want. Bake in 300 degree oven 1 hour or until hard. When cold, paint and decorate. To preserve, spray with shellac. To keep unused dough moist, store in plastic bag or airtight container.

PAPIER MACHE

2 bowls cloth
warm water flour
old newspapers mint oil

Papier mache pulp is easy to make and fun to use. First, tear up the newspaper into small pieces, about 1 inch. (You can tear the paper into strips and have the kid(s) tear it into 'confetti' bits.) Put all the paper bits in a large bowl and soak in warm water for at least an hour. Then, empty water and put paper in a cloth. Close the corners and squeeze out as much water as you can. Put the 'pulp' in the bowl. In the other bowl, add 2 large spoons of flour with enough water to make a paste (like slightly thin oatmeal). A few drops of oil helps to keep your work from cracking when dry. Mix the paste and the pulp together and you're ready to go. The pulp can be handled and molded like clay to make animals, buildings, trees, people, etc. You can use a form such as a balloon, bag, etc. to make larger items like masks or pinatas and other large projects.

Fine Motor Red Flags

- Avoidance of fine motor tasks
- Delayed emergence of hand dominance
- Not crossing midline
- Ignoring one hand (bilateral hand use)
- Lack of progression with grasps
- Excessive problems in any of the above areas



Getting Ready To Write

Writing Instruments

Thick vs. Thin shaft

use thin when it does not regress grasp

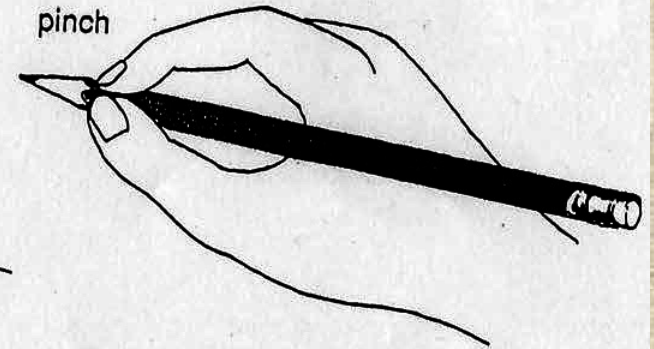
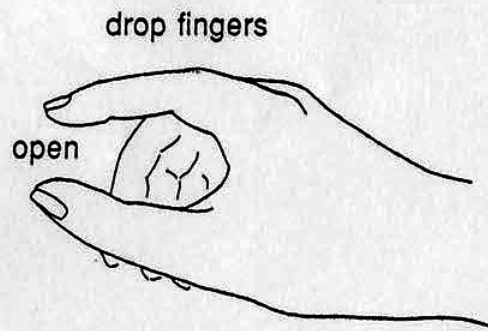
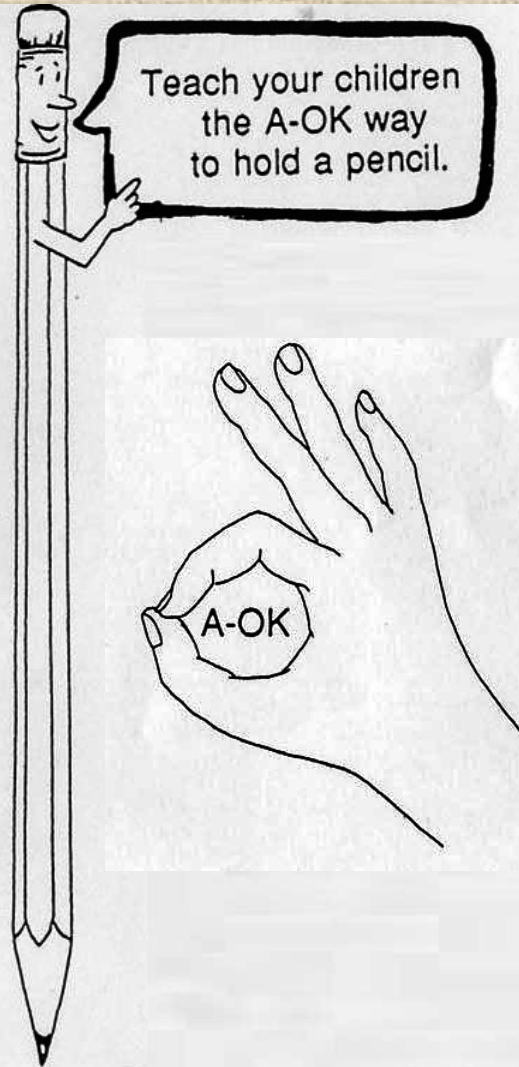
Long vs. Short shaft

use short when fisting is rigid

Mechanical Pencils, Markers,
Crayon bits, etc.



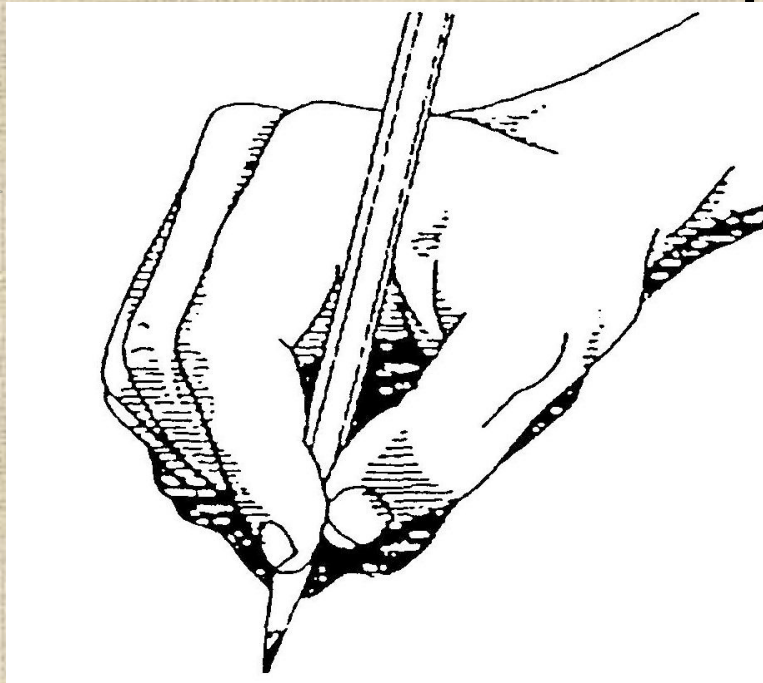
Getting Ready To Write



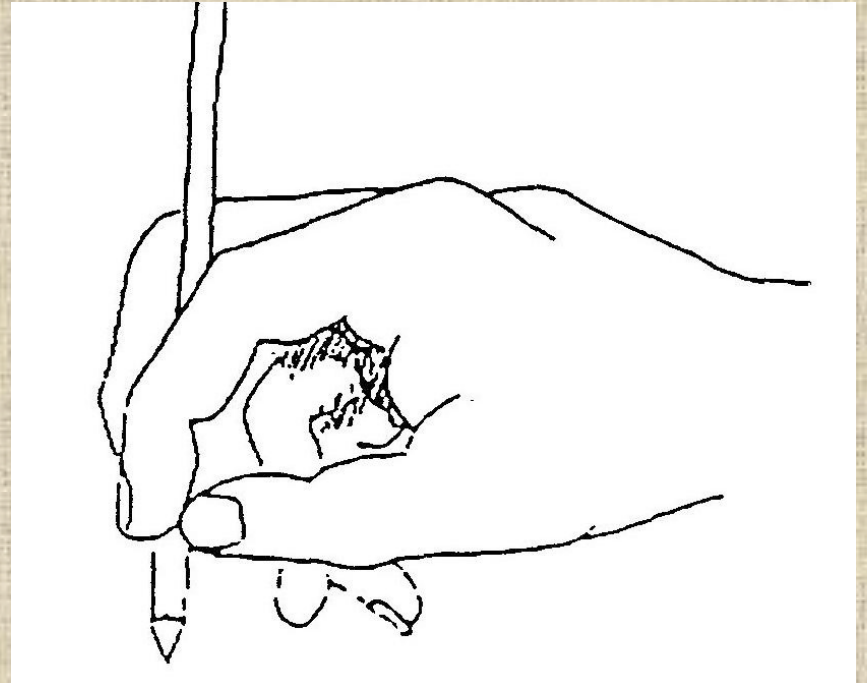
Getting Ready To Write

Grasp

Efficient Grasps



Dynamic tripod



Architect's grasp

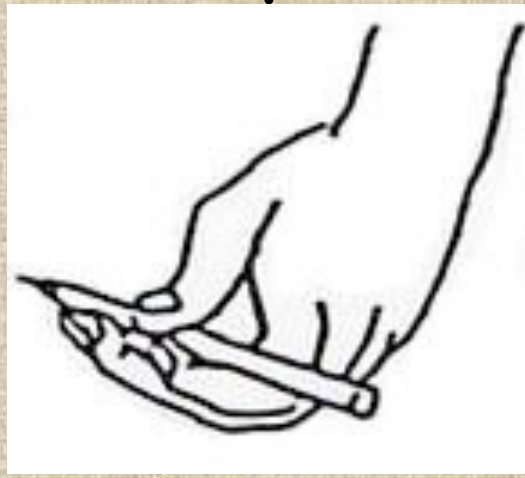
Getting Ready To Write

Grasp

Inefficient Grasps



Thumb wrap



Supinate

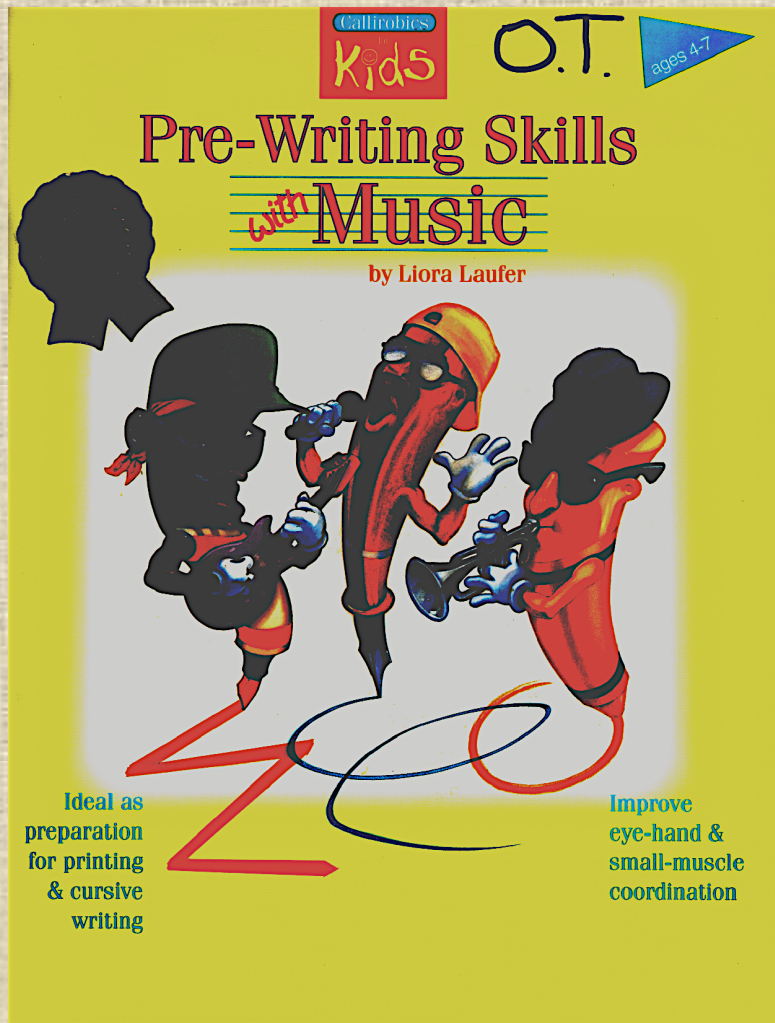
- wrist is hooked



Quadrupod

- 4 fingers on pencil

Callirobics

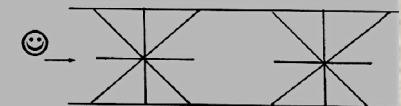


Pre-writing skills with Music

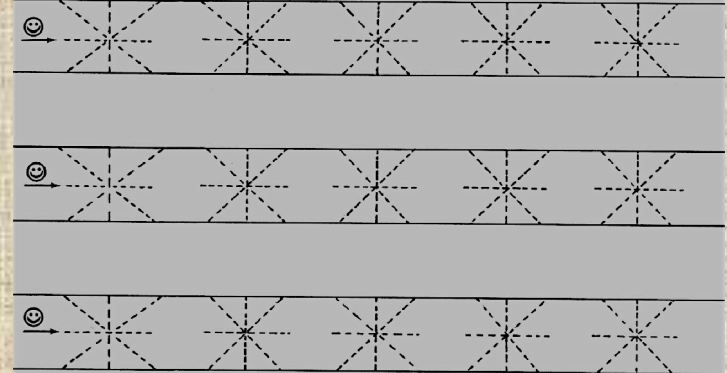
EXERCISE # 5



THE WISHING STAR



Trace the dotted lines. Start at the "smiley" face and go in the direction of the arrows while the music plays.



Now, draw the pattern without the help of the dotted lines.

Getting Ready To Write

Types of Paper

Unlined - no guide for letter placement, facilitates simple motor memory

Lined - challenges space and position

Interlined paper - dashes between lines of paper
provides visual cue for letter alignment, look at different styles

Raised lined paper - provides tactile cue to keep letters on the baseline, also in different formats

General Teaching Principles

- Larger to smaller
- Work according to developmental principles
- Consistency
- Group by formation
- Short, frequent sessions
- Multisensory approach



Printing/ Written Output Really Writing!

If students demonstrate readiness, it makes more sense to teach lower case letters first

Lower Case Letters
(Grouped by formation)

l h b k t f
i r n m p j u
c a d g q s e o
v w x y z

Upper Case Letters
(Grouped by formation)

F E L H T I
D P B R J U
O Q C G S
V W M N A K X Y Z

Letter and Name Paths

You can rearrange the letters to create any name or word. Letter graphics at bottom of 'workshop materials' page



Try Rainbow Writing

ITCHY'S ALPHABET



Related Apps:
Little Writer
Pocket Phonics
i write words
Writing Wizard
Letter School

Cutting Skills

Pre-requisite skills

1. Ability to open and close hand
2. Ability to use both hands together
3. Ability to isolate and/or combine the movements of the thumb, index and middle fingers
4. An awareness of how objects relate to one another
5. Ability coordinate arm, hand and eye movements



Developmental Stages of Cutting

1. Shows interest in scissors
2. Holds scissors with fingers in correct holes
3. Opens and closes scissors in a controlled fashion
4. Holds material with non-dominant hand
5. Makes snips or single cuts
6. Manipulates scissors in a controlled fashion One hand stable, one hand mobile
7. Coordinate lateral direction of scissors
8. Cuts forward in a straight line
9. Cuts simple geometric shapes
10. Cuts simple figures



Maped™ Koopy Scissors

Special, self-opening scissors can be obtained for children with more difficulty.

With these scissors, the child only needs to squeeze the scissors shut.

The more difficult extension is assisted by springing action, which can be quickly turned off after ample practice. (Once the kid gets the pattern, turn off the spring, and the child may repeat the practiced motor pattern, strengthening it.)

Cutting Issues

POSSIBLE PROBLEMS

- Difficulty controlling direction of cutting
- Difficulty orienting paper
- Poor body position when cutting

POSSIBLE SOLUTIONS

- Place stickers or coloured tape on paper
- Glue popsicle sticks parallel to each other on a sheet of stiff paper. Child cuts between the sticks.
- Hold paper while student cuts
- Hand over hand assistance
- Demonstrate and explain where to hold paper
- Verbal cues while student cuts
- Ensure appropriate size table and chair
- Some do better resting forearm or wrist on table.
- Others do better away from table, with elbows tucked close to body.
- **Hold scissors perpendicular to floor, thumbs up**

Share Sensory Info

What Works?	What Bothers Me?
Mouth	Mouth
Move	Move
Touch	Touch
Look	Look
Listen	Listen
Smell	Smell
Pressure / Heavy Work	Pressure / Heavy Work

Sensory Supplement Working Forms at
http://www.marclandry.ca/Marcs_Sensory_Oasis/Workshop_Materials.html

Resources

www.Schoolspecialty.ca

www.flaghouse.ca

www.fdmr.ca

www.therapro.com

www.pfot.com

<http://collinseducationalsupplies.com/collinsedu/>

[www.rehabmart.com/category/Pediatric Fine Motor.htm](http://www.rehabmart.com/category/Pediatric%20Fine%20Motor.htm)

<http://www.therapyinabin.com/>

www.pediatrictherapynetwork.org/catalog/distributors.cfm

www.superduperinc.com/

www.wikkistix.com (made with petroleum, can leave hard to remove residue on hands)

Great West Wholesale Ltd 1670 Pandora St, Vancouver 604-255-9588
enter from alley between Franklin & Pandora (\$200 min purchase for non profits or groups)