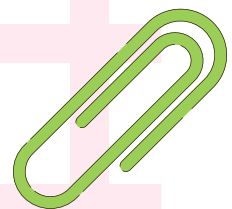


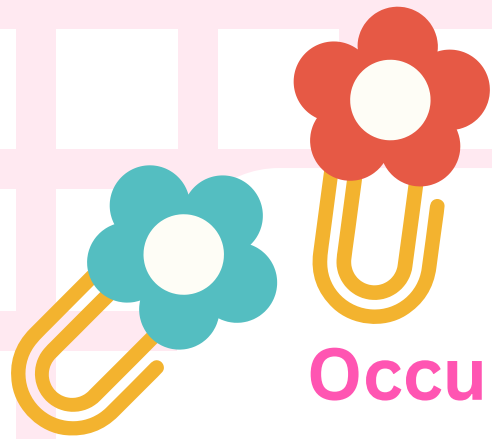
HANDWRITING INSERVICE



Maeve, Alexa, Emily, Amanda, Marissa,
Callyn and Chloe



OTs Role



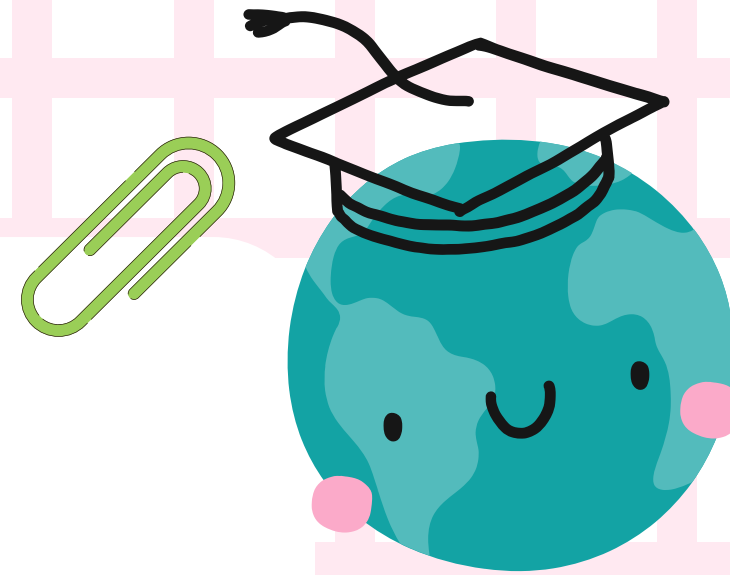
Occupational Therapy in schools helps students participate and succeed in school activities by improving the skills they need for learning, writing, attention, and independence

We work on:

- **Fine motor skills:** managing writing tools and scissors
- **Visual motor skills:** copying from the board, throwing ball at recess
- **Sensory regulation:** sitting still, managing noise
- **Executive functioning:** planning, organizing, following routines
- **Self care:** opening containers, tying shoes, managing backpacks



OTs Role



We Serve Students Through:

A. Direct Services (1 on 1 or small group)

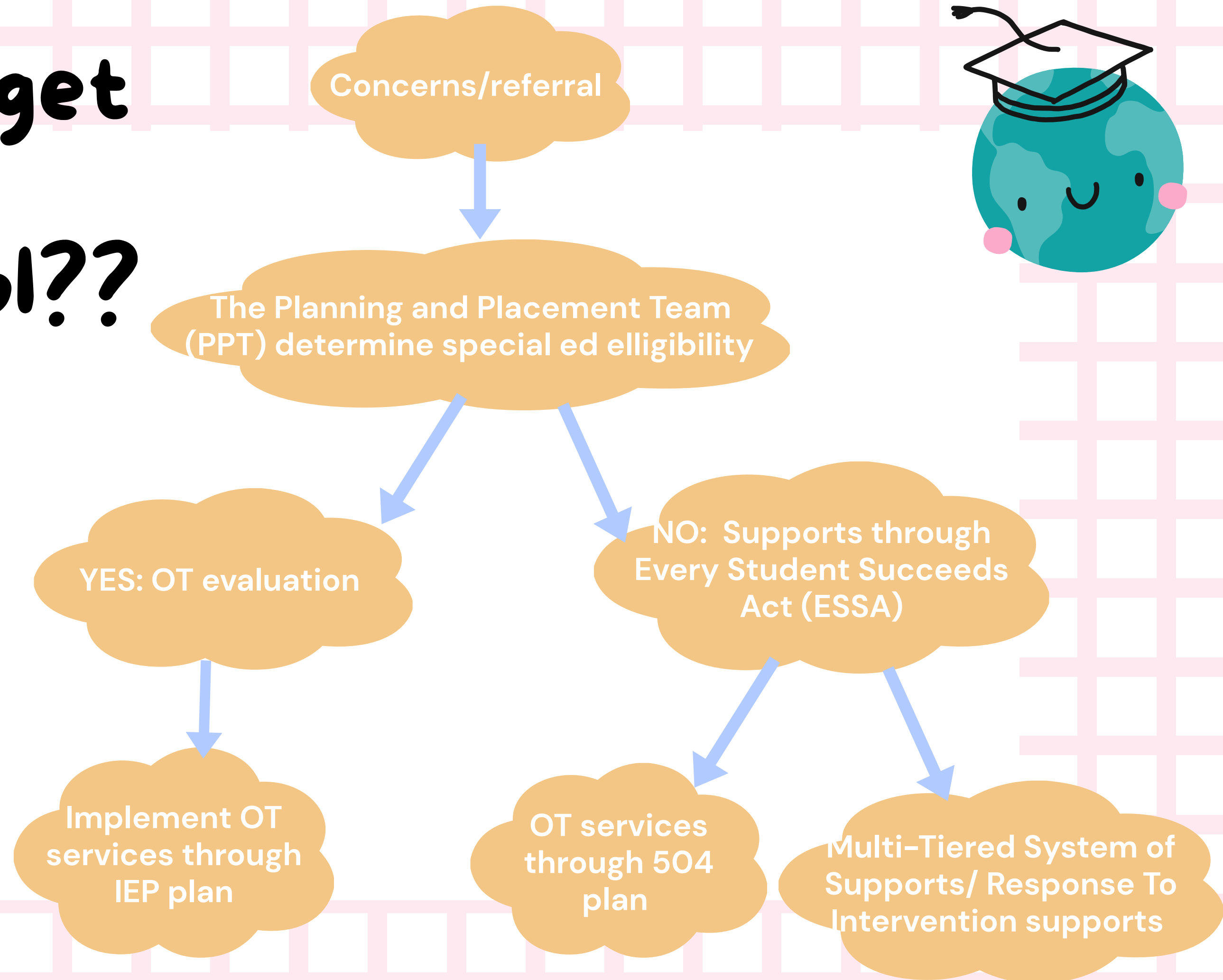
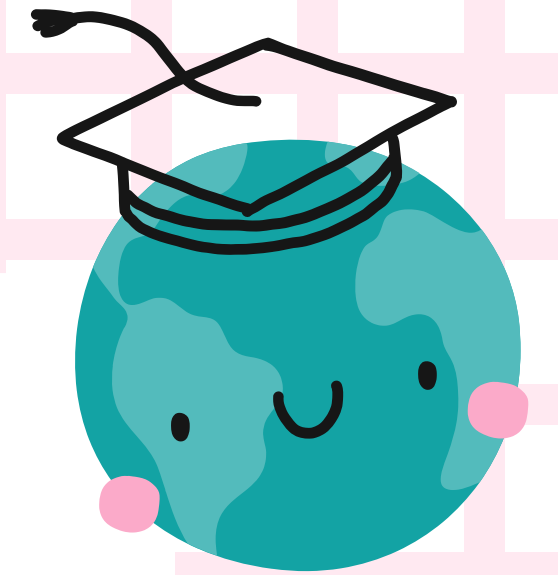
- When children's deficits significantly impact access to the curriculum
- Based on an IEP (Individualized Education Program) with measurable goals
 - Ex: Cassidy will independently write a 7 word sentence with correct spacing and letter size

B. Indirect Services

- Help teachers modify tasks
 - breaking writing assignments into steps, transitions in class
- Recommend environmental changes
 - seating, lighting, visual supports, noise
- Problem solve student participation in daily routines



How to get OT in school??



Development of Handwriting

Things to Consider:

- Proximal stability - distal control
- Hand muscles - dynamic movement
- Fine motor experiences
- Visual - motor and sensory

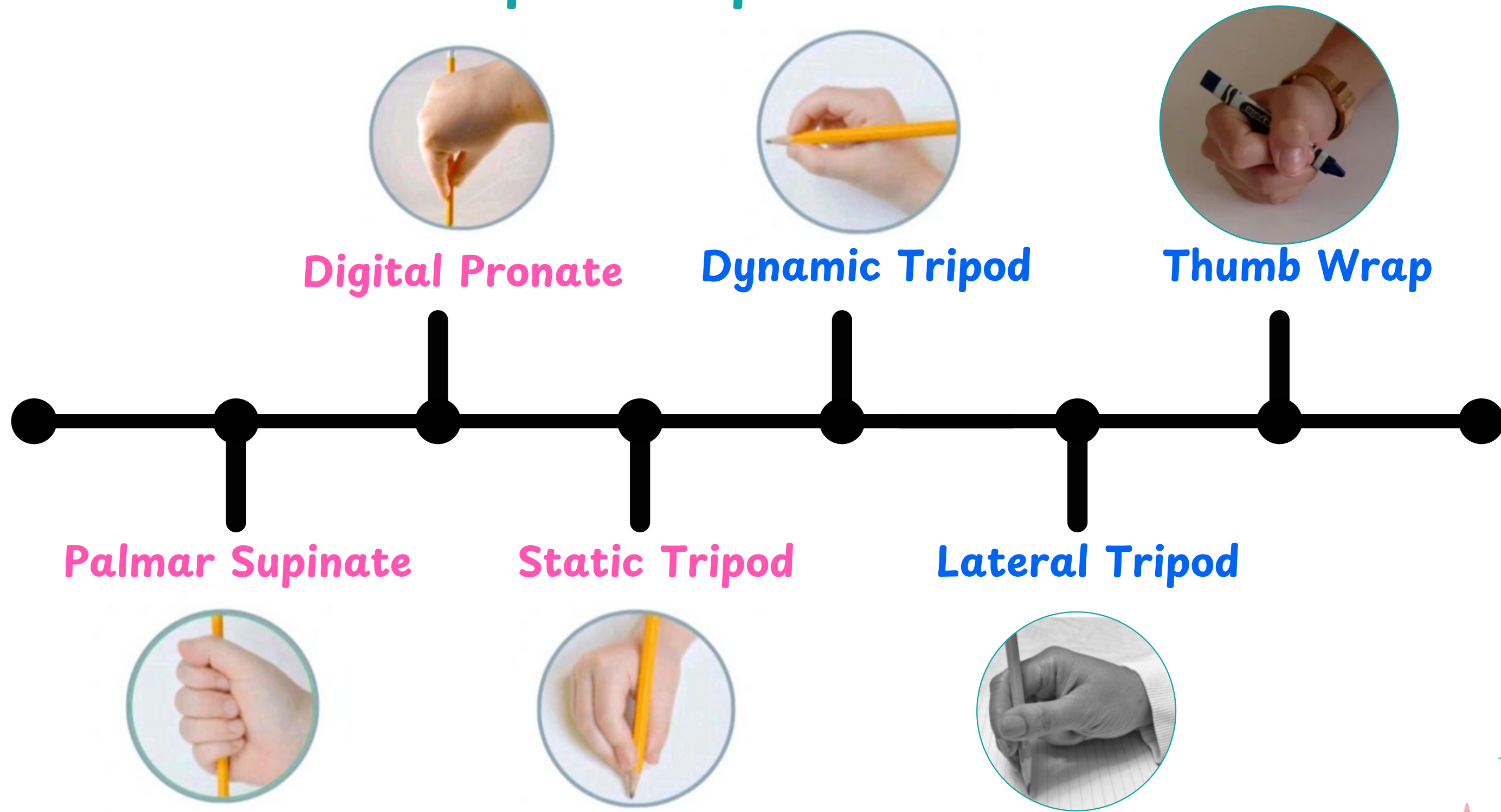
*****we need to consider how children experience things before entering the classroom!**

This is also why grasp varies and development is inconsistent with age at time***



Development of Handwriting

Grasp Development Timeline



Factors that Impact Handwriting: Motor

Fine Motor Control:

- Writing requires precise finger and hand movements
 - Challenges → oversized, uneven, or misplaced letters

Pencil Grasp:

- Grasp affects pencil control and pressure
 - Immature grasp → fatigue, heavy pressure
- Adjusting the pencil position supports smooth writing/erasing

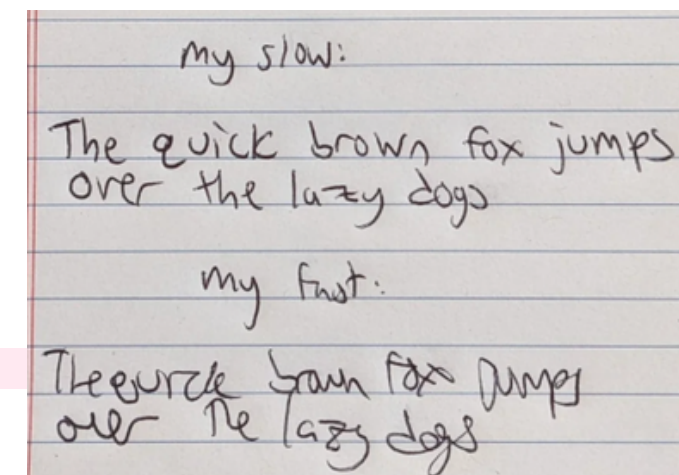
Bilateral Coordination:

- One hand writes while the other stabilizes
 - Weak coordination → reduced accuracy



Movement Pacing:

- Writing speed impacts control of the pencil
 - Too slow = uneven letters
 - Too fast = messy writing



Factors that Impact Handwriting: Visual-Perceptual & Sensory

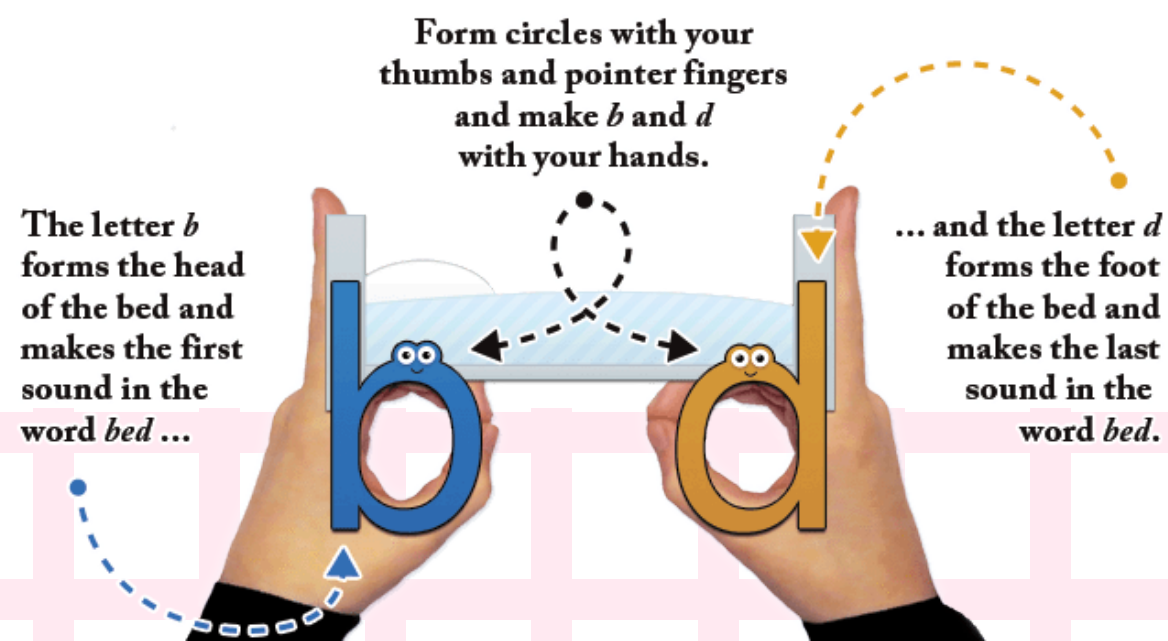
VISUAL-PERCEPTUAL

Letter Discrimination:

- Telling similar letters apart (b/d; p/q)
 - Weakness → letter reversals, accuracy errors

Visual Memory:

- Remembering what letters look like and their order within a word
 - Weakness → slow copying and more errors



SENSORY

Body and Sensory Awareness

- Proprioception/Kinesthesia: Knowing hand position and pencil pressure
 - Weakness → writing too light, too heavy, or outside lines
- Tactile awareness: Using touch to guide hand movements
 - Low tactile feedback → uneven strokes, inconsistent letter formation



Factors that Impact Handwriting: Cognitive & Emotional

COGNITIVE

Attention:

- Distractibility limits focus during writing tasks
 - Less practice → weaker letter formation and reduced fluency



EMOTIONAL

Mood:

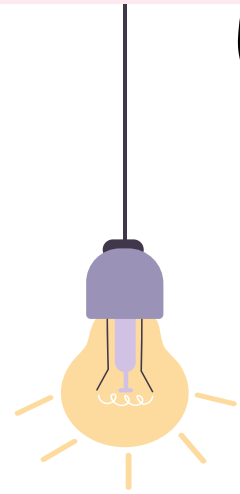
- Mood directly affects writing quality
 - Boredom, anxiety, or frustration → poorer performance

Confidence:

- Confidence increases writing effort
 - Low confidence → rushing, avoidance of writing tasks, inconsistent effort



Factors that Impact Handwriting: Environmental & Biomechanical



Environmental Conditions:

- Lighting:
 - Impacts visual clarity and writing accuracy
- Noise:
 - High-noise → distraction, reduced focus
 - Quiet space → better attention



Posture & Positioning:

- Ideal Posture
 - Feet flat on floor
 - Hips & back supported
 - Knees at $\sim 90^\circ$
 - Forearms resting on desk
- Poor Posture
 - Slouching → reduced endurance and legibility
- Desk and Chair Height
 - Too Low → leaning forward and elevated shoulders
 - Too High → feet unsupported and increased fatigue



Adaptive Equipment

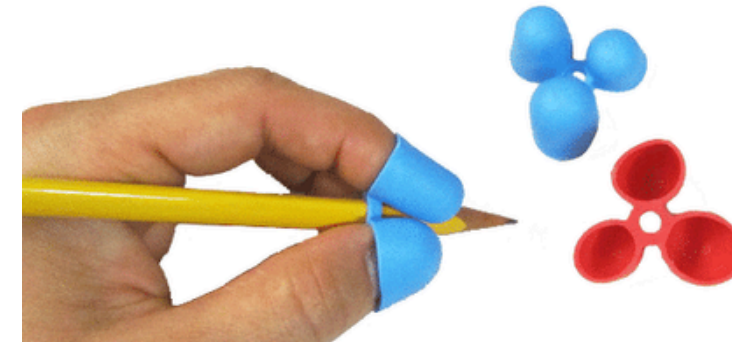
Pencil Grips



dynamic tripod grasp



triangle



claw



pencil cushion



grotto



solo

Adaptive Equipment

Types of Writing Utensils



weighted pencils



ergonomic Stablio pens



golf pencil



triangular pencils



slant-tip markers

Adaptive Equipment

Writing/Posture Supports



slant boards



footrests



Dycem



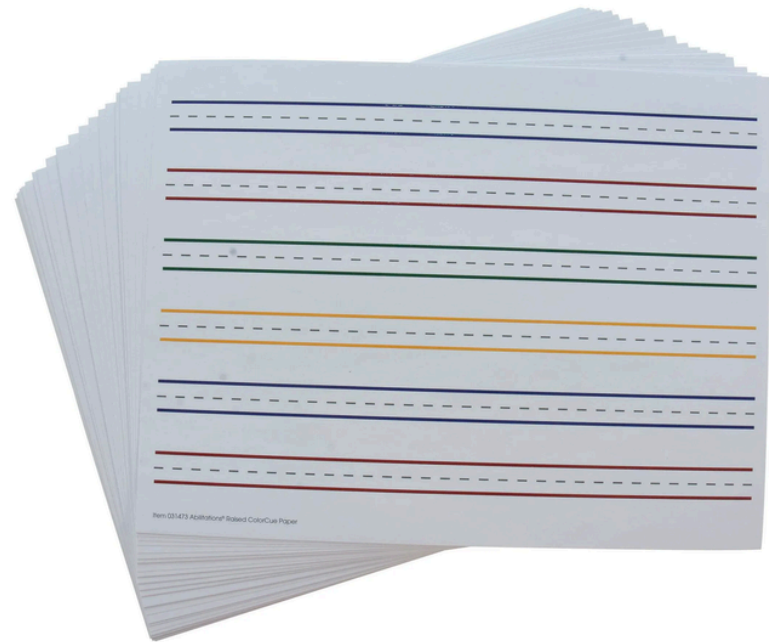
adjustable height
desks/chairs



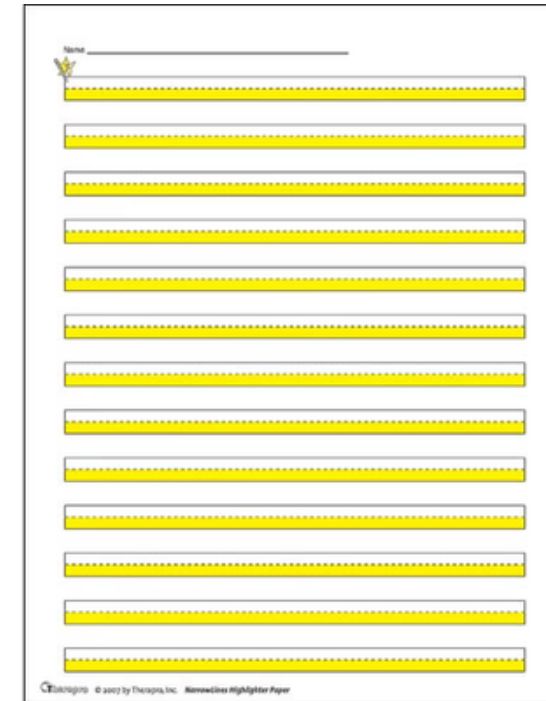
chair supports

Adaptive Equipment

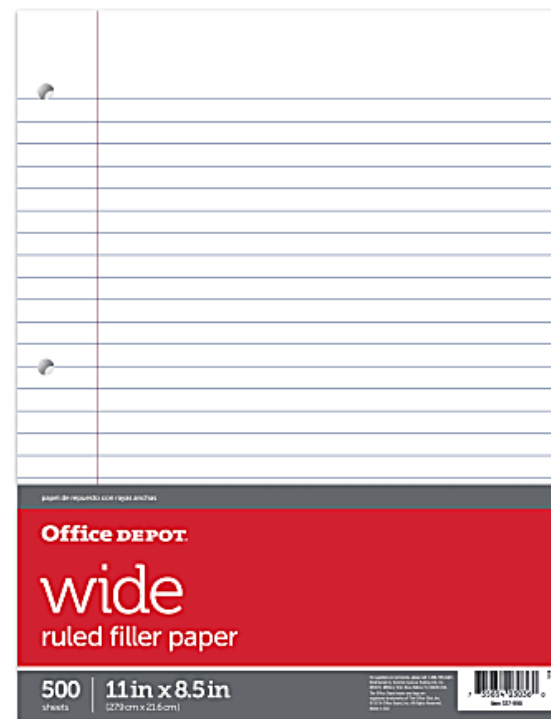
Types of Paper



raised line



highlighted-line



wide-ruled



Handwriting Programs

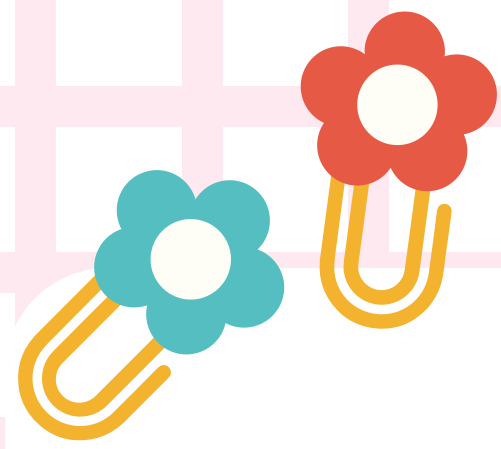


- Structured methods for teaching handwriting
- Provide consistent language
- Use multisensory strategies (visual, tactile)
- Teach letter size, spacing, and line use
- Help students who need extra guidance and whole-class

Why should we use these?

- Helps kids learn letters in consistent way
- Cuts down on reversals and sizing issues
- Allows teachers and OTs to use same cues
- Research supported
- Easy to integrate





Handwriting Programs

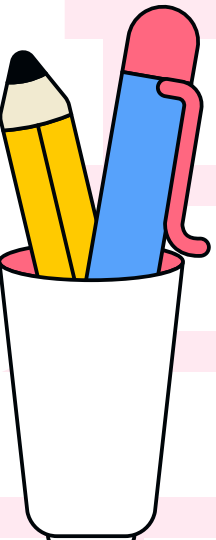
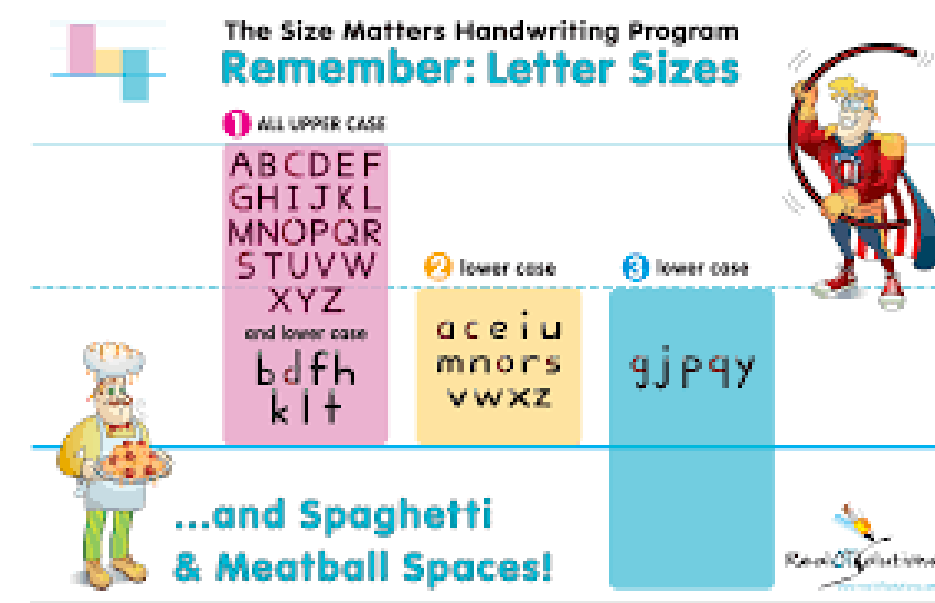
Handwriting Without Tears (HWT):

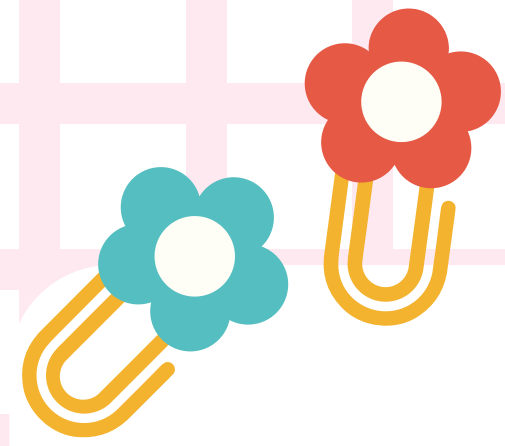
- Uses blue mat, wood pieces (big lines/curves, little lines/curves)
- Simple language cues
- Multi-sensory activities
- No top baseline on paper
- Teaches letters top-to-bottom and left-to-right



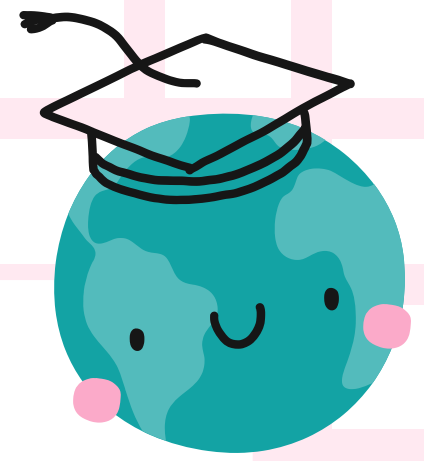
Size Matters Handwriting Program:

- Focuses on letter size using “touch points”
- Kids aim to make “star-worthy letters”
- MagnaTiles on whiteboards help teach size + placement
- Color system: pink, yellow, teal





Handwriting Programs



Loops & Other Groups:

- Cursive writing program using movement-based letter groups

Fundations:

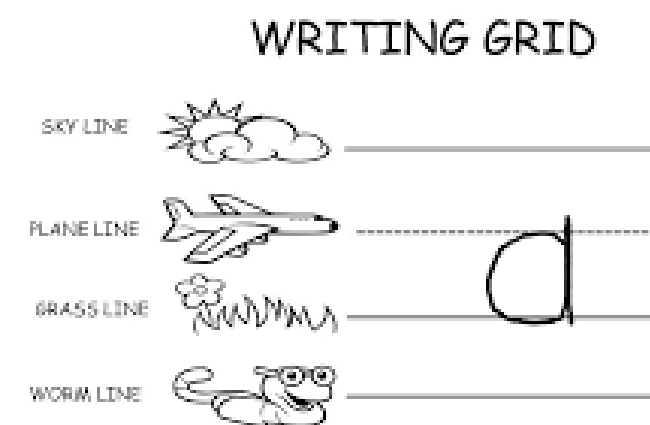
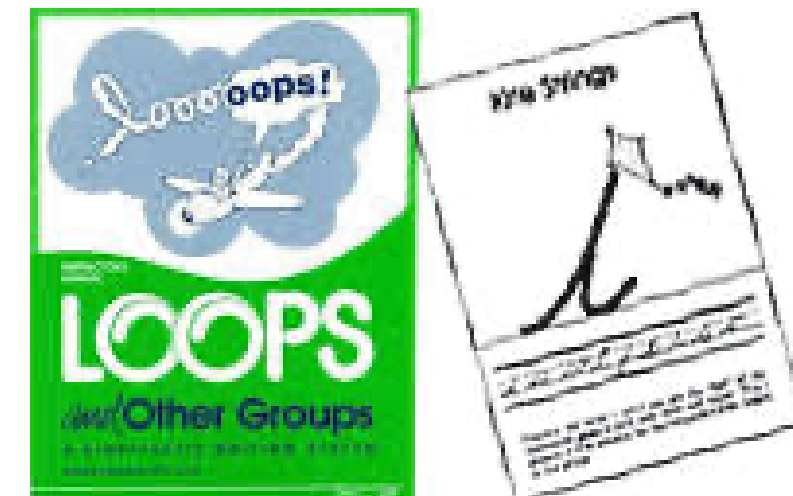
- Early-grade program with picture cues (“sky line and grass line”) for line placement
- Literacy and handwriting together

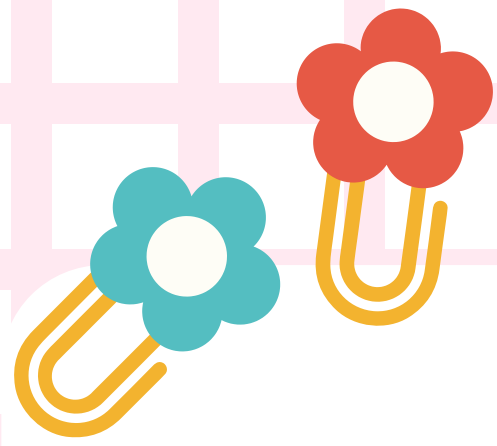
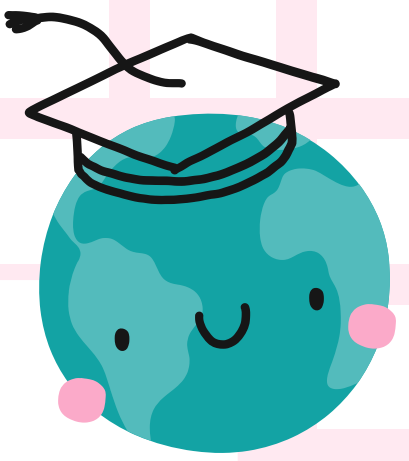
Give Yourself a Hand:

- OT intervention ideas for handwriting
- Helps build physical skills needed to write

TRICS:

- Strategy/activity ideas for older students
- Helps kids remember step-by-step expectations





Let's see how it feels!

d

1

Handwriting Without Tears

2

Fundations

3

Size Matters Program

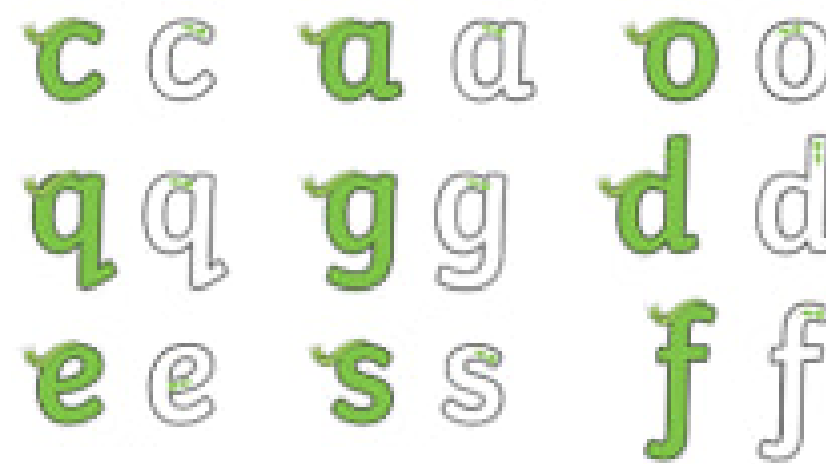
Interventions

Letter Formation & Tracing

- Teach in stages
- Letter Groups
 - Top to bottom (B,D,E,F,M,P,R)
 - “Curly caterpillar” letters (c,a,g,q,o)
 - Short (a,c,e,i,m,n,o,r,s,u,v,w,x,z)
 - Tall (b,d,f,h,k,t)
 - Below line (g,j,p,q,y)
 - Counterclockwise circle letters (C,G,Q)
- Desk letter strips (for visual tracking also)
- Two step tracing
 - dotted → independently
- Start/Stop practice
- Letter forming through play doh or other art materials
- Fix the mistake activities (reversed letters)

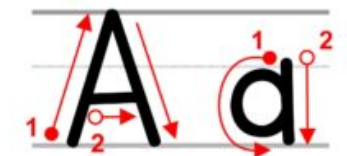


Curly Caterpillar Letters



Letter A Writing Worksheet Date: _____ Name: _____

Letter A Writing Practice



Trace and write uppercase letter A:



Trace and write lowercase letter a:



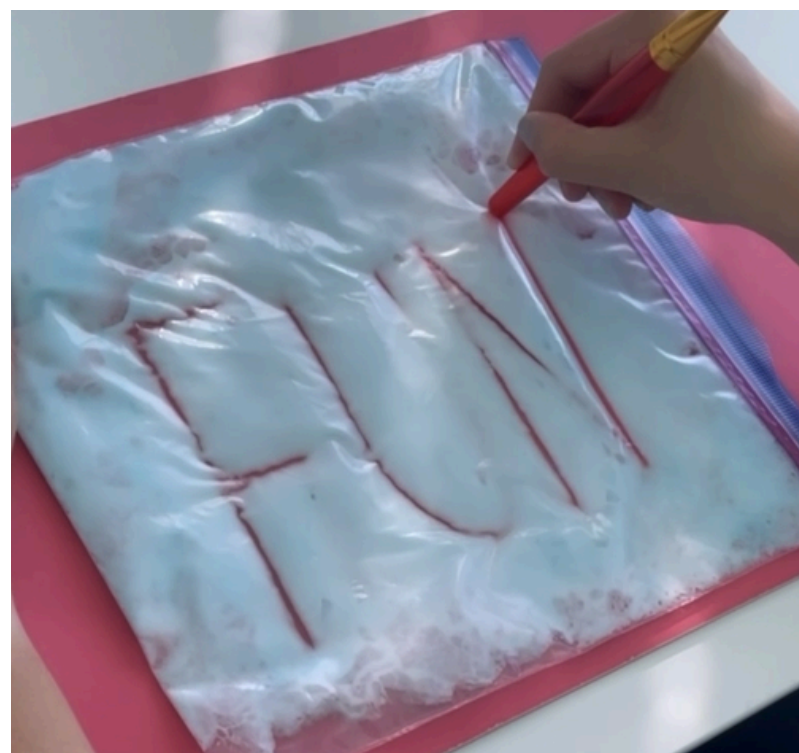
© AlienSchooler.com



Interventions

Sensory

- **Tracing bins in various textures and materials**
 - Sensory trays
 - Shaving cream/gel
 - Play doh
- **Textured paper** (tactile feedback)

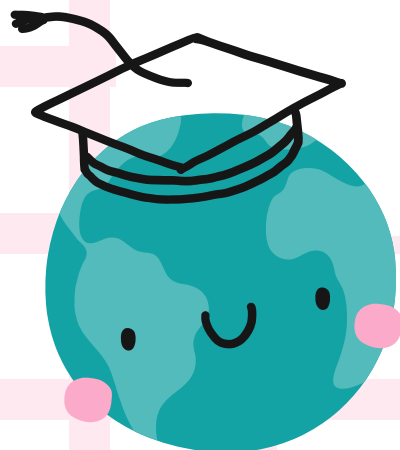


PROPRIOCEPTION

Allows you to apply more or less pressure and force in a task.

Pencil Pressure!

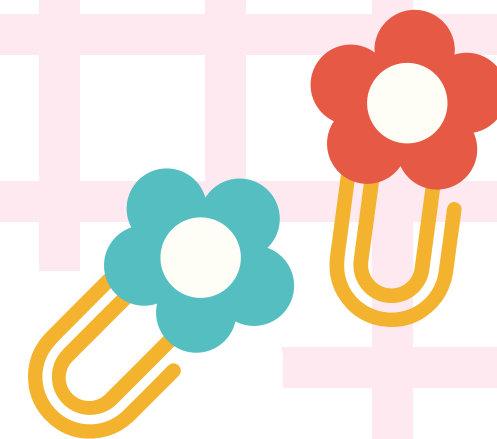
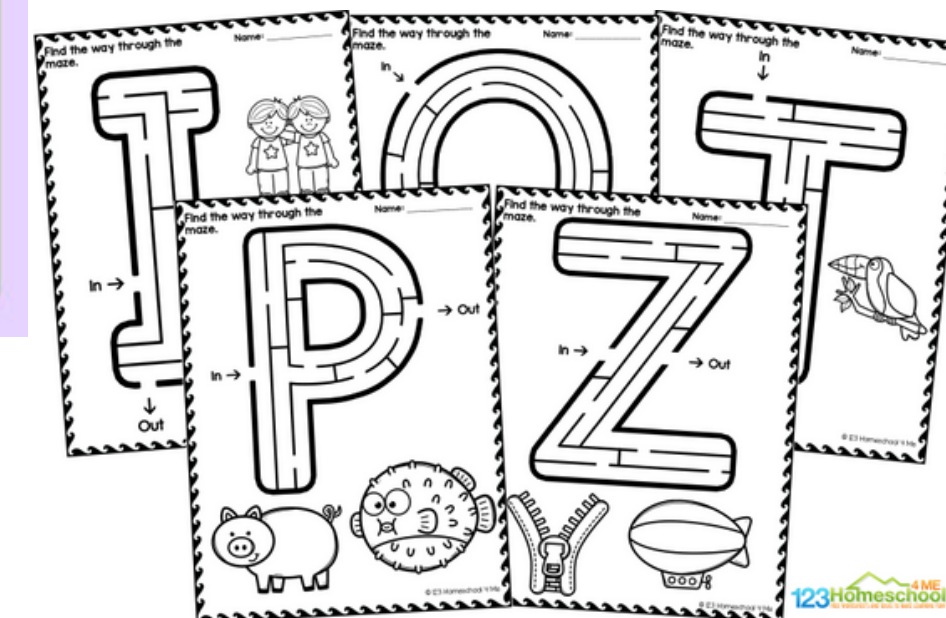
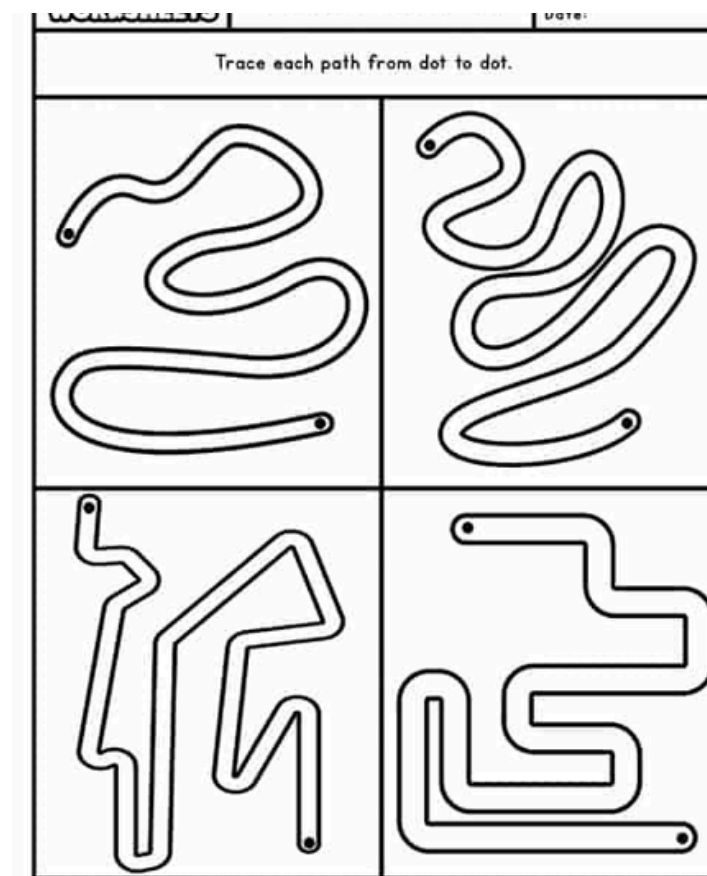
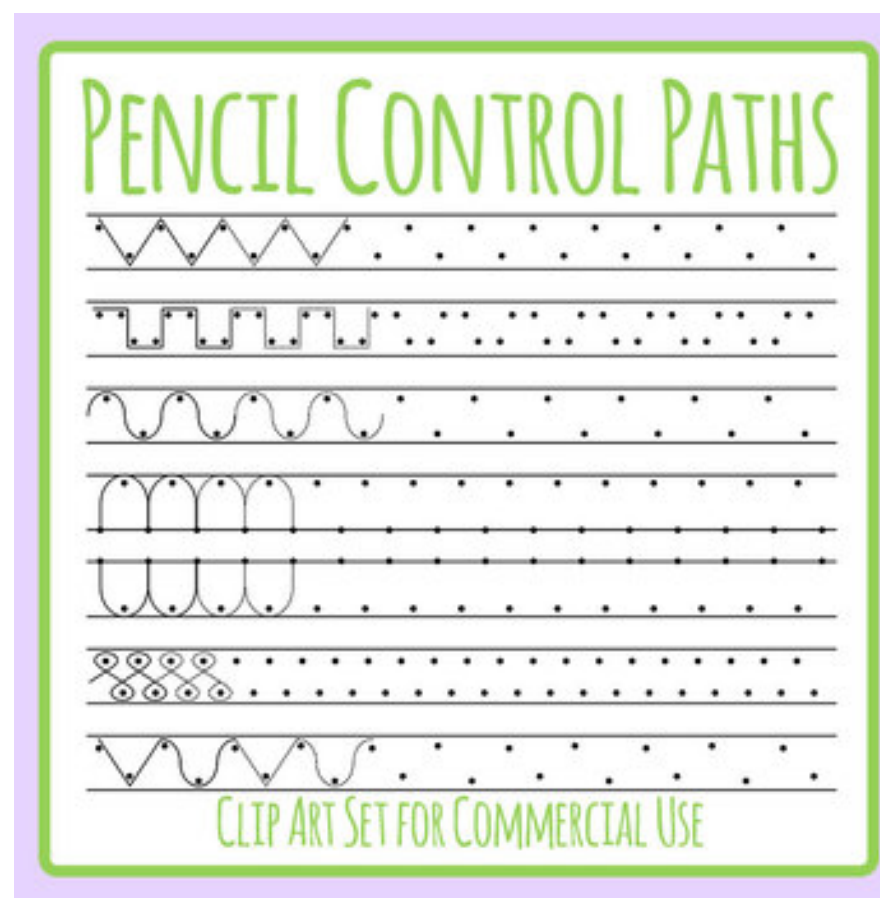
- Different types of paper (transfer paper) to bring awareness
- Practice ghost writing
 - write very lightly and erase to leave no marks)



Interventions

Pencil Control & Coordination

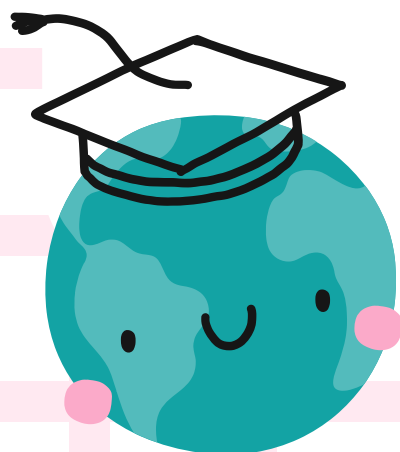
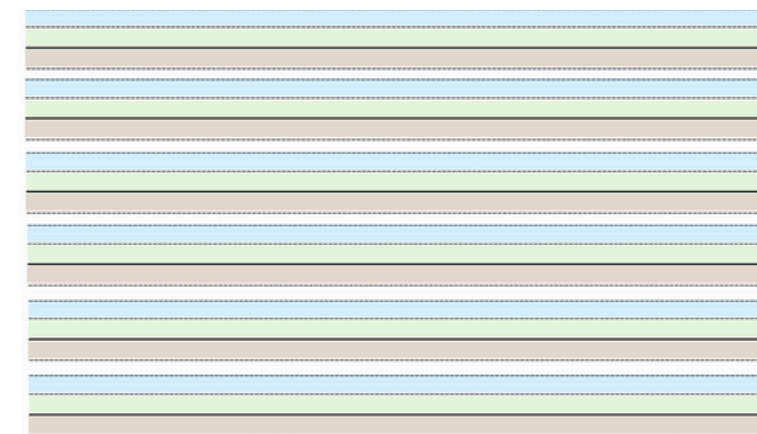
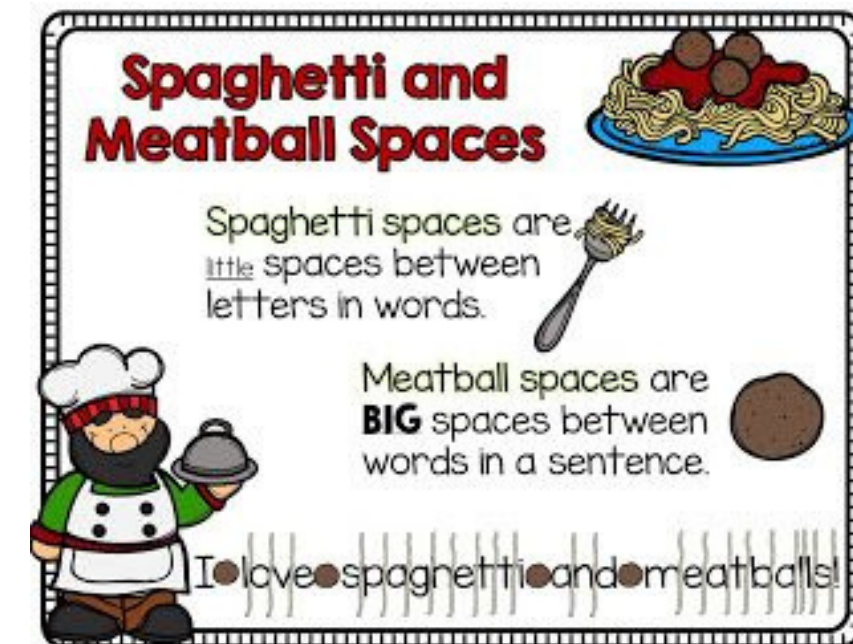
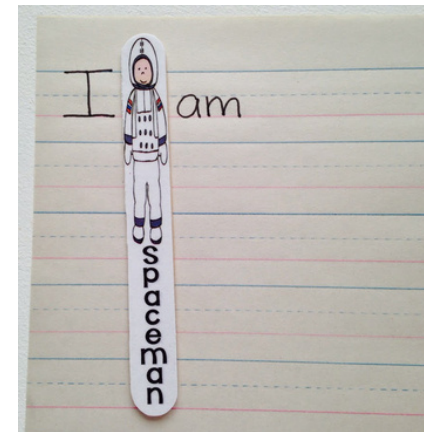
- Tracing mazes
- Dot-to-dot activities
- Shading boxes/pictures
 - light, medium, dark
- Shape tracing



Interventions

Spatial & Line Awareness

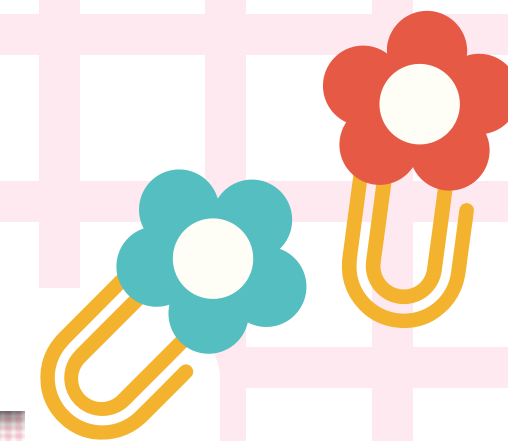
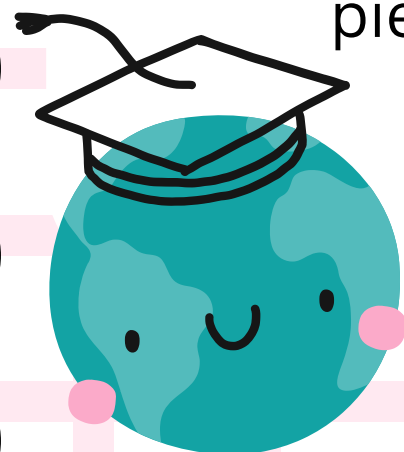
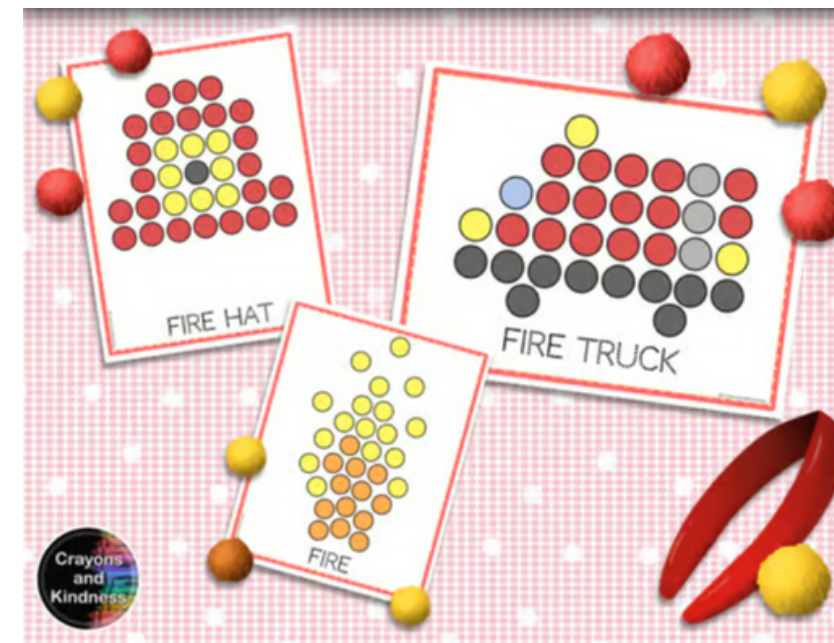
- **Space Man**
 - Tool for consistent spacing between words
 - Can be used as a class activity or for individual students
- **Spaghetti and Meatball**
 - Create visual anchor chart
 - Use uncooked spaghetti and popsicle sticks with pom-poms on the tops as “meatballs”
- **Adapted paper**
 - Highlighted lines
 - Raised line paper
 - Sky/dirt paper



Interventions

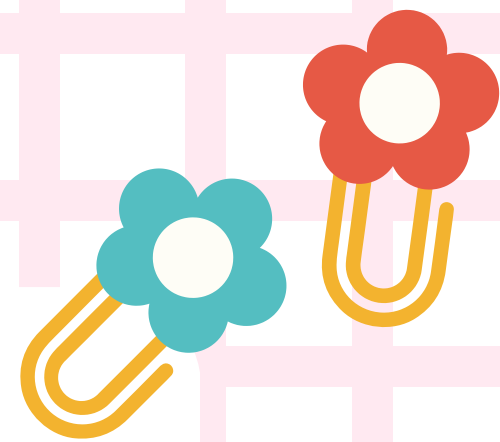
Fine Motor Strength & Precision

- **Tweezer and Tong Activities**
 - Can be built into math activities
 - Sorting, counting, transferring objects
- **Beading and Stringing Items**
 - Pattern making, spelling with letter beads, sequencing tasks
- **Smaller Writing Tools**
 - Golf or broken pencils, small crayons, skinny mechanical pencils
- **Play doh play**
 - Quick hand warm up: roll snakes, pinch and flatten cookies
 - Good for early finishers or quiet centers
- **Cutting**
 - Incorporate crafts or worksheets that involve cutting pieces out





What Do OT's Do?



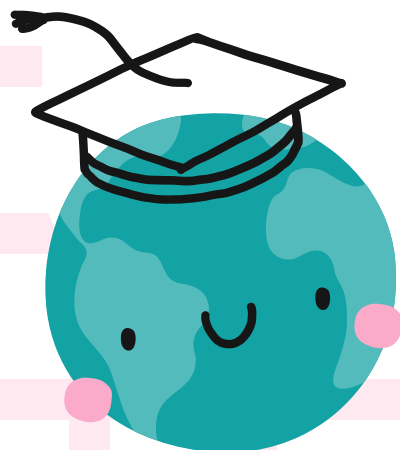
- **Assess the big picture**
 - Where are the areas of strength and weakness
- **Evaluate the mechanics of writing**
 - Look at posture, shoulder, wrist and hand control
- **Fine-motor strengthening activities**
 - Use of objects in putty, in-hand manipulation of coins, tweezers
- **Multisensory letter practice**
 - Sensory bins, play doh, kinetic sand
- **Explicit handwriting practice**
 - Modeling, guided practice and independent writing
- Keyboard introduction for students with significant challenges

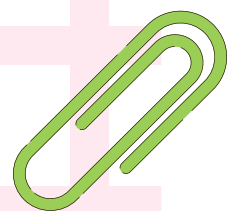
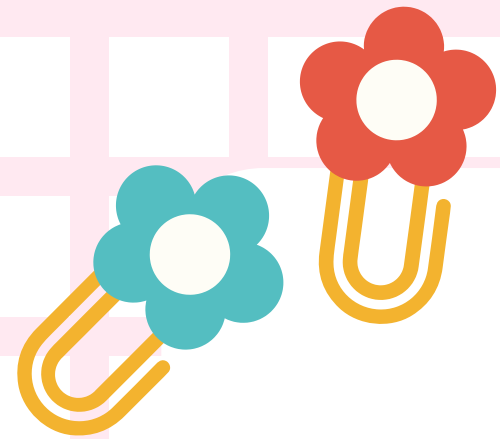
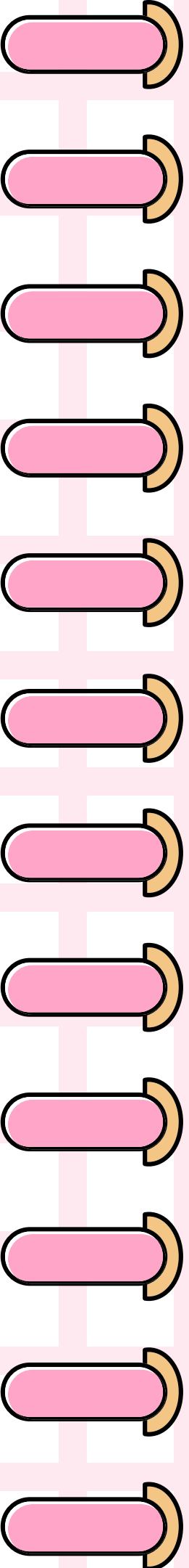
What Works?

- Occupation-based interventions
- Breaking it down – meet the child where they're at
- Multi-sensory interventions
- Short, frequent, high-quality practice

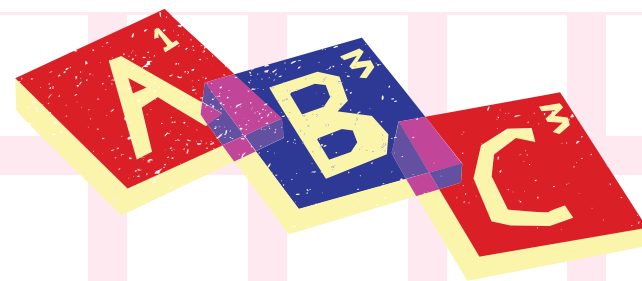
What Doesn't Work?

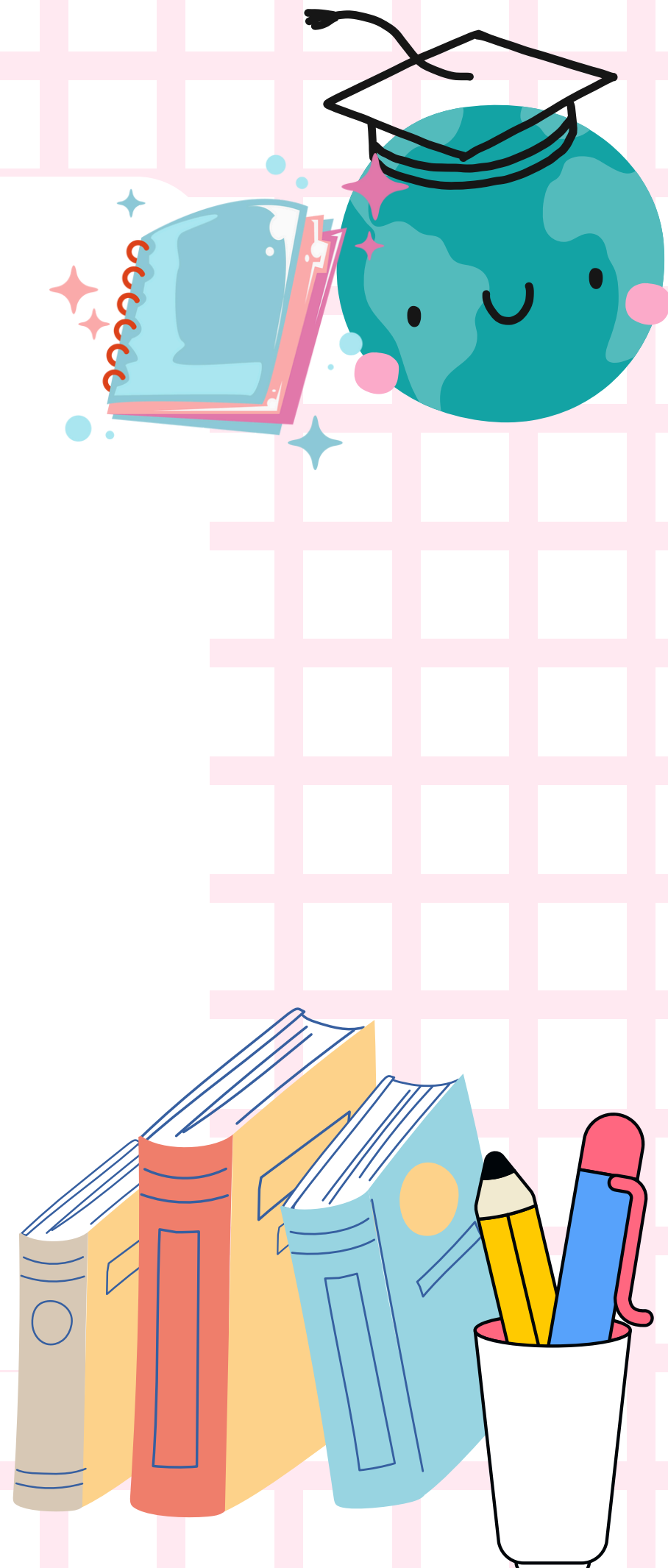
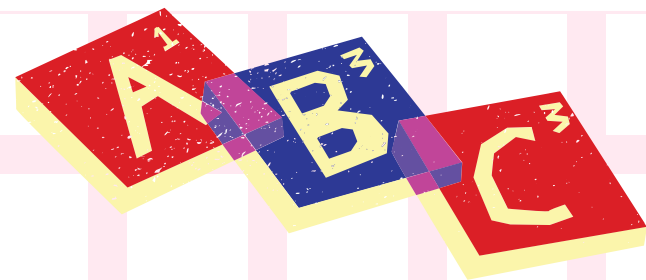
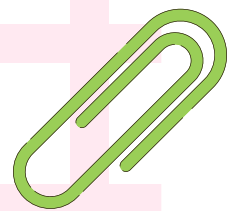
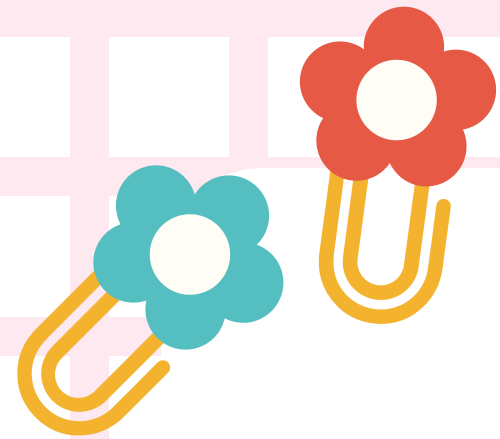
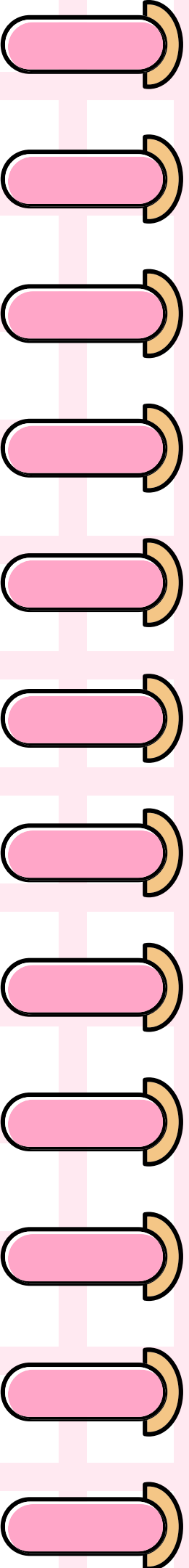
- Hours and hours of writing
- Only using worksheets
- Telling students to “write neater”
- Only copying from the board
- Using “fat pencils”



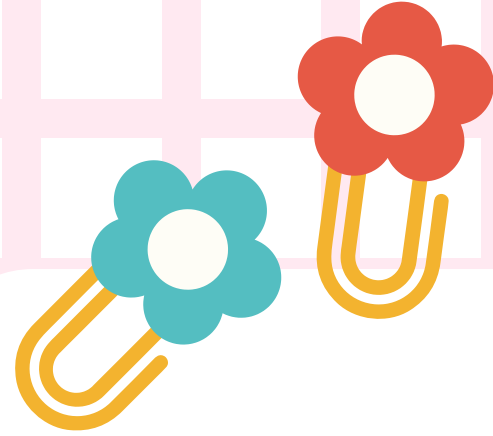


QUESTIONS?

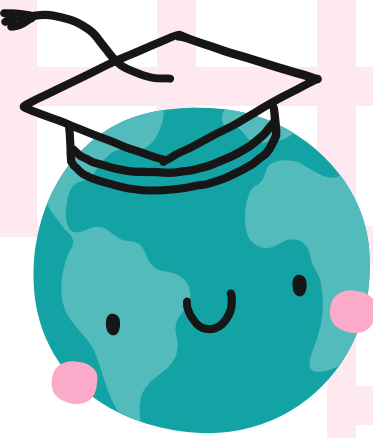




THANKS!



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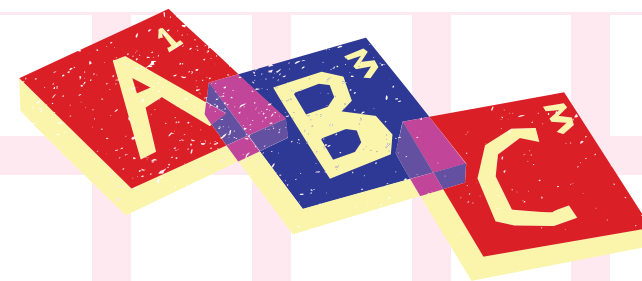
Alisha M. Ohl, Hollie Graze, Karen Weber, Sabrina Kenny, Christie Salvatore, Sarah Wagreich; Effectiveness of a 10-Week Tier-1 Response to Intervention Program in Improving Fine Motor and Visual–Motor Skills in General Education Kindergarten Students. *Am J Occup Ther* September/October 2013, Vol. 67(5), 507–514. doi: <https://doi.org/10.5014/ajot.2013.008110>

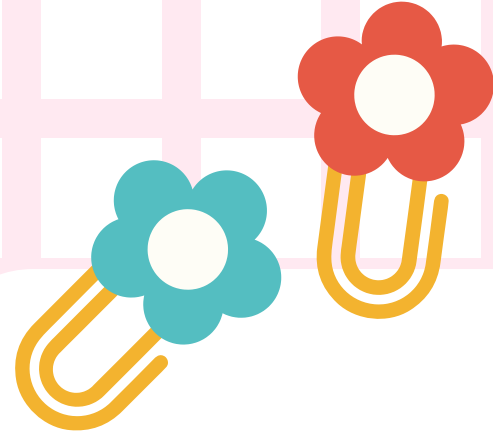
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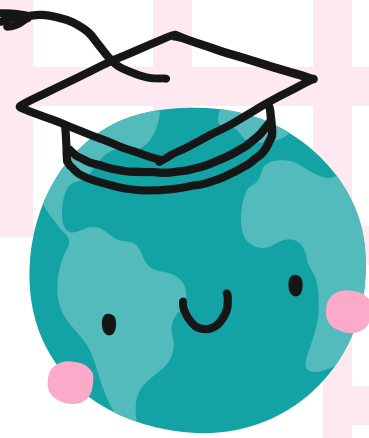
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