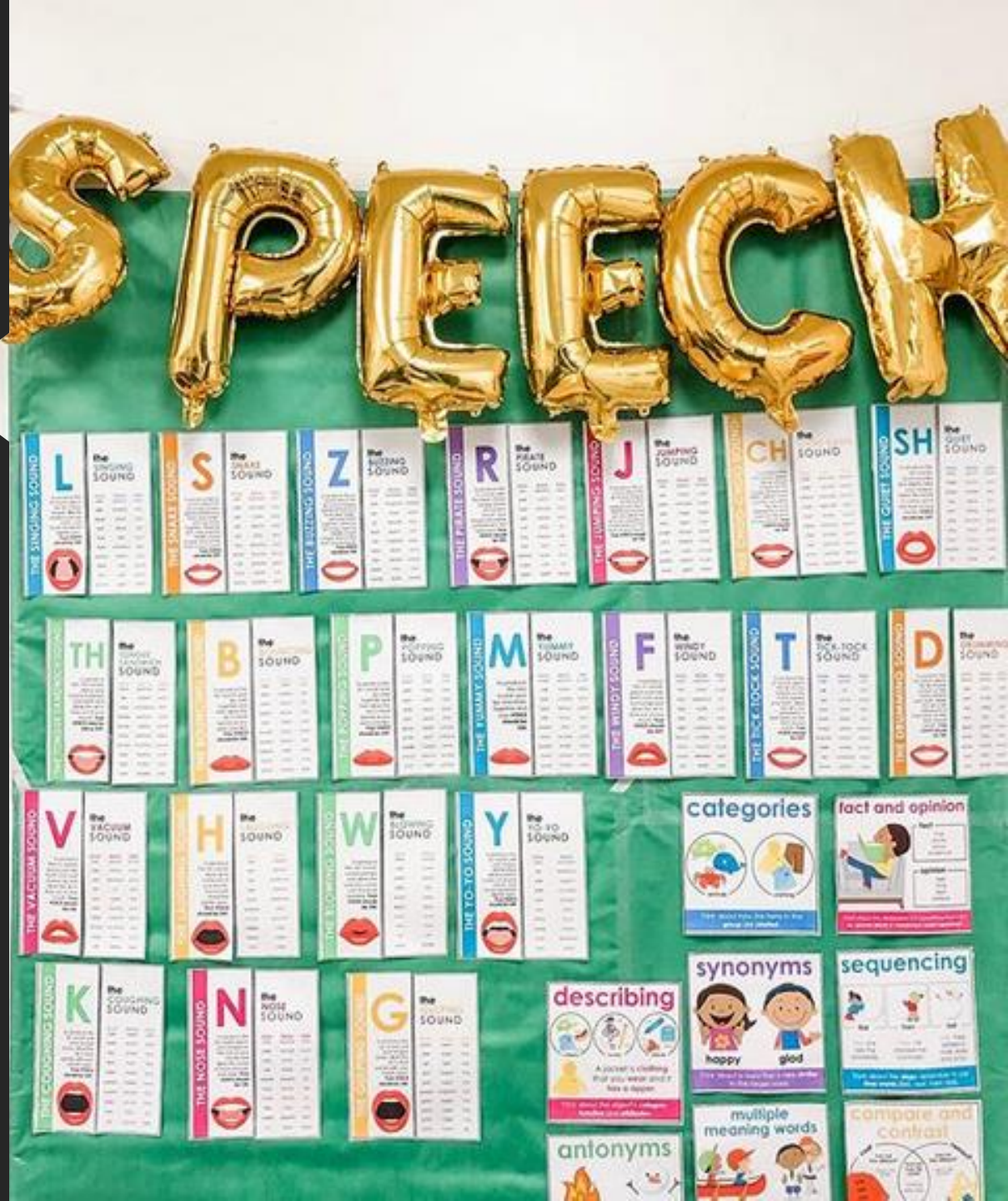
Incorporation of Fine Motor Skills into Speech/Language Sessions

By: Hannah Koronkiewicz, MS, CCC-SLP/L

Disclaimer:

**I am not an Occupational Therapist nor have I studied specific OT concepts (e.g. self-regulation, sensory output, etc.) that Occupational Therapy involves. I have some knowledge about these concepts, but from a speech-language pathologist perspective. This presentation discusses research I have read and personal experience of growth I have noted/learned during my own personal speech/language sessions.



It won't always fun and sessions won't all be as beautiful as butterflies.

HOW DO I KEEP MY STUDENTS ENGAGED WHEN WORKING IN A SMALL GROUP WITH INDIVIDUAL GOALS?!

The answer?? FINE MOTOR ACTIVITIES!!! Keep their hands/bodies busy

What are fine motor skills?

"**Fine motor skills** are the coordination of small muscles in the fingers, hands, and forearms. Children need to develop strong fine motor muscles in order to complete important tasks such as holding scissors to cut, gripping a pencil to write, or buttoning/zipping their clothes when getting dressed (Texas Speech Mom)."

http://www.texasspeechmom.com/fine-motor-skills-in-speech-therapy/

Fine Motor Developmental Age Chart

Skills to be mastered between ages 3-4	Possible Implications if not mastered
• Builds tower of nine small blocks • Copies circle • Imitates cross • Manipulates clay material (rolls balls, makes snakes, cookies) • Uses non dominant hand to assist and stabilize the use of objects • Snips paper using scissors	• Delayed pre-writing skills development • Frustration and/or avoidance of pencil based tasks • Poor pencil grasp and pencil control • Poor self-care skills such as eating • Delayed drawing skills

Skills to be mastered between ages 4-5	Possible implications if not mastered
• Cuts on line continuously • Copies cross • Copies square • Writes name • Writes numbers 1-5 • Copies letters • Handedness well established • Dresses and undresses independently	• Difficulties holding and manipulating a pencil • Difficulties learning to write name and other letters of the alphabet Dependence on caregivers for every day activities such as dressing • Frustration and/or avoidance of pencil based tasks

https://childdevelopment.com.au/resources/child-development-charts/fine-motor-developmental-chart/

Fine Motor Developmental Age Chart

Skills to be mastered between ages 5-6	Possible Implications if not mastered
• Cuts out simple shapes • Copies triangle • Colors within lines • Uses a 3 fingered grasp of pencil and uses fingers to generate movement • Pastes and glues appropriately • Can draw basic pictures	• Difficulties learning to form letters correctly • Poor handwriting • Difficulties demonstrating academic ability on paper • Fatigue during pencil based tasks • Frustration and/or avoidance of pencil based tasks

Skills to be mastered between ages 6-7	Possible implications if not mastered
• Forms most letters and numbers correctly • Writes consistently on the lines • Demonstrates controlled pencil movement • Good endurance for writing • Can build Lego, knex and other blocks independently • Tie Shoe Laces	• Difficulties getting ideas down on paper • Experiencing fatigue during handwriting tasks • Difficulty keeping up in class due to slow handwriting speed • Poor legibility of handwriting • May impact on self-esteem when comparing work to peers • Possible frustration and/or behavior difficulties due to avoidance of pencil based tasks

https://childdevelopment.com.au/resources/child-development-charts/fine-motor-developmental-chart/

Link between Motor development & Language Development

- "The field of psychology has paid little attention to the study of motor development...leading to inadequate coverage of motor skills...leads us to wonder about the actual processes of motor control and its relationship to other developmental systems." (Beherens & Hauch)

- "The central claim that links motor development to language development is the idea that advanced motor skills provide infants with more opportunities for experiencing their world" (Iverson, 2010).

- Posture as an infant --> sitting on own --> breath regulation --> sitting affects vocal track curvature

"The link between oral motor control and speech and language has been n… lo… In… **ge** **d… aired.** M… f m… in… s. In ty… m… d to be related to language skills.

Children who were poor at oral movements were not good at language, although children who were good at oral movements could fall anywhere on the distribution of language abilities. Oral motor skills may be a necessary precursor for language skills.

https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1022&context=researchexchange
- Alcock, K. (2006). The development of oral motor control and language. Down Syndrome Research and Practice, 11(1), 1-8.

OTHER STUDIES

"Little attention has been devoted to the relationship between motor and language development. This is particularly surprising given the long-standing, widespread but empirically unverified belief among parents, pediatricians and even some developmentalists that when children are in the process of acquiring new motor skills, progress in language comes to a halt" (Iverson).

1967, Dr. Lennenberg study:
1) that the development of language is independent of articulatory skills;
2) that mastery of articulation patterns cannot be predicted on the basis of general motor development.

Iverson, J. M. (2010). Developing language in a developing body: The relationship between motor development and language development. Journal of Child Language, 37, 229-261.

Studies completed linking language/motor development

STUDY #1

- Sticky Mittens to help engage in play w/ toys

Result: Those w/ the mittens were able to pick up & explore more objects AND were engaged for a longer period of time

STUDY #2

- Specific Oral-motor movements to predict speech fluency in children with autism

Result: Children who blew raspberries (6mos) animal sounds (18mos), sticking out tongue (24mos) were noted to have greater speech fluency in older years than those who were unable to complete these oral-motor movements as young children

https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1022&context=researchexchange

What skills are addressed during fine motor speech language activities?

Hand eye coordination

requiring the eyes to focus and stay focused in order to guide hands to successfully complete the task

Object Manipulation

placement of an object on/at a certain location

Critical Reasoning Skills

e.g. how do I make this playdoh rounder, how can I make the tape not stick to itself, how can I cut straighter

Why is it important to work on Hand-Eye Coordination?

- "Hand Eye Coordination also involves and utilizes so many other important body systems such as the child's proprioception, vestibular, visual processing and sensory-motor.
- Jean Ayres" says in her book *Sensory Integration and the Child* "Integration of vestibular and proprioceptive inputs gives the child control over his eye movements. Without the guidance of these sensations, it is difficult for the child to focus on an object or follow it as it moves. Later it may be difficult to move the eyes along a line of print. Reading may be so exhausting that it simply isn't worth the effort.

- Ayres, A. Jean., and Jeff Robbins. *Sensory Integration and the CHild: Understanding HIdden Sensory Challenges.* WPS, 2013.
- "Hand-Eye Coordination Improves Cognitive and Social Skills." Psychology Today, Sussex Publishers, www.psychologytoday.com/us/blog/the-athletes-way/201311/hand-eye-coordination-improves-cognitive-and-social-skills.
- Villaneda, Alene. "HAND-EYE COORDINATION: Without Strong Hand-Eye Coordination, Tracking & Reading May Be Delayed." *Integrated Learning Strategies, 6 May 2019, ilslearningcorner.com/2016-02-hand-eye-coordination-how-hand-eye-coordination-helps-early-rreaders/.*

Speech Language Sessions & Fine Motor

- IF you are noticing a decrease in language skills during session, try and decrease the difficulty of the motor task to see if the language skills increase
  - e.g. roll playdoh to smash, instead you roll the playdoh into balls and they smash
  - DON'T EXPECT THEM TO KNOW TO USE ANYTHING

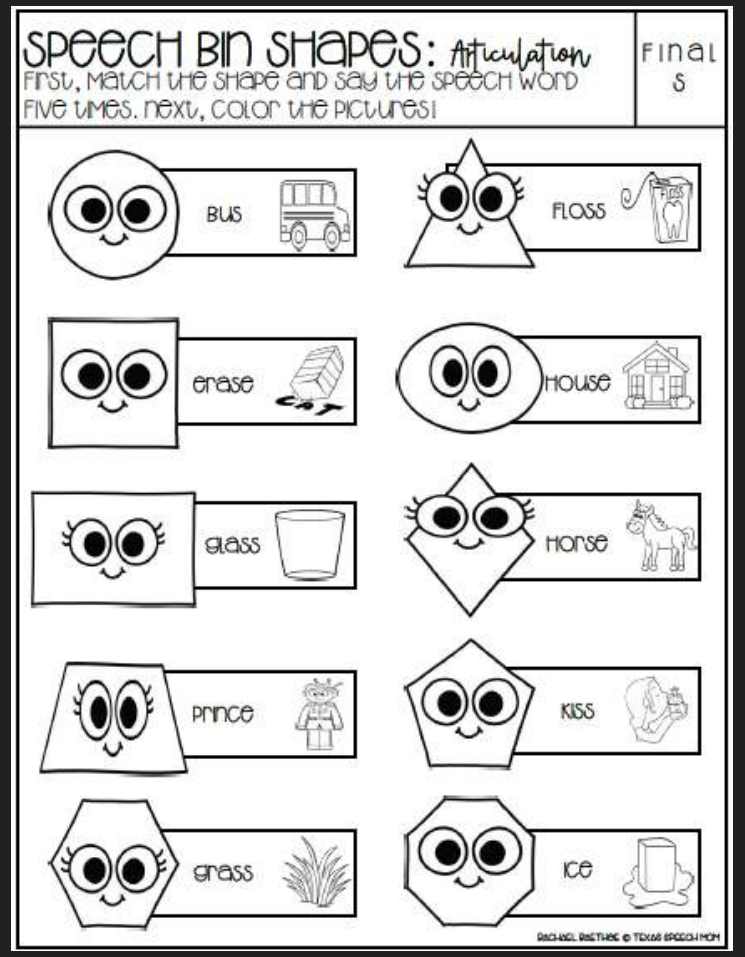
- 1st priority should be targeting speech/language goals. BUT it is beneficial for the SLP to incorporate fine motor activities to help gorw other skills

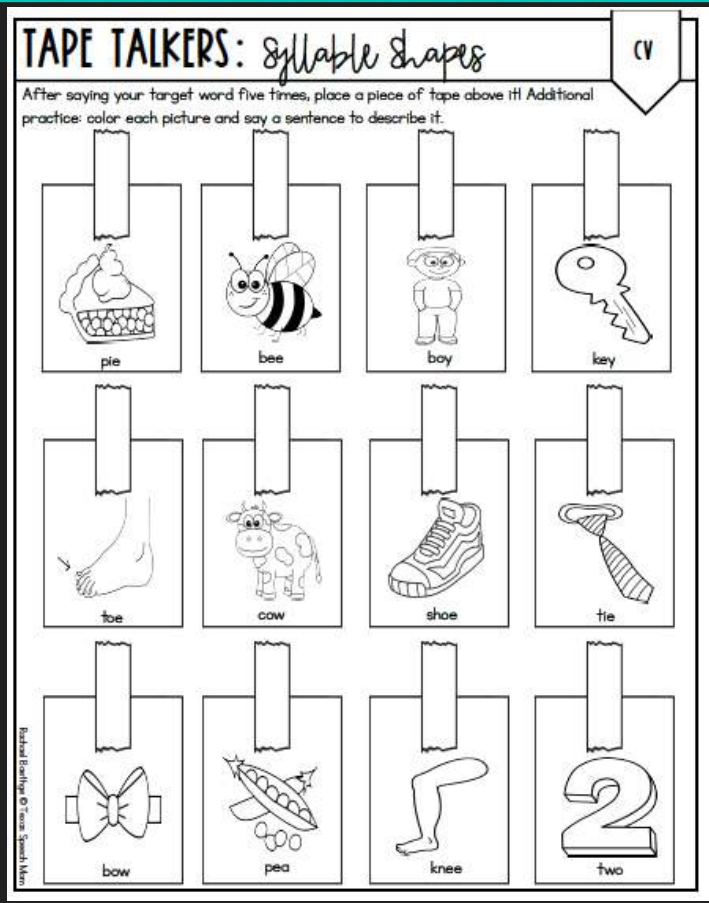
- "Researchers found that children with strong fine motor skills also showed better executive function skills, and stronger gross motor skills predicted better social behavior.

Articulation Session Goal: 100+ trials EACH

HOW?!

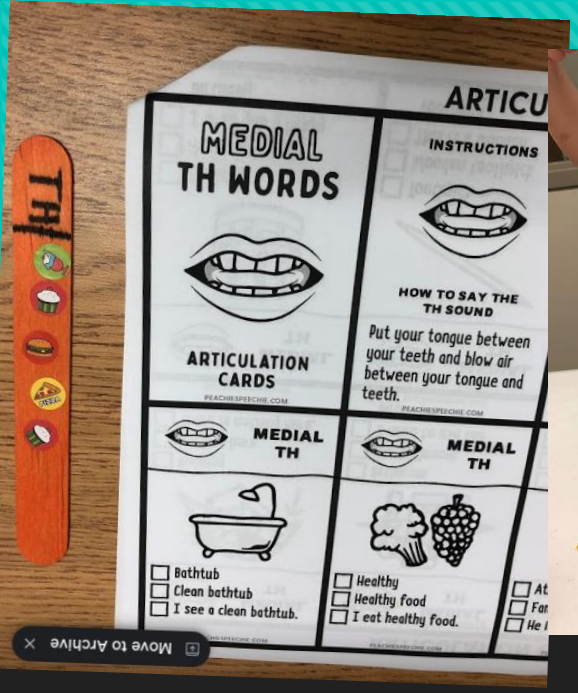
- Say your word 5x using the target sound.
- Say your word in a sentence.
- At the end...
  - choose your 3 favorite words and describe them.
  - say each word 1 more time
  - what did you work on when lining up at the door

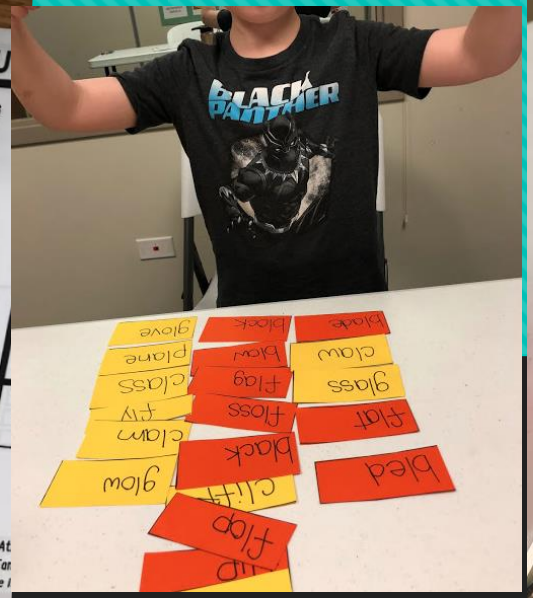


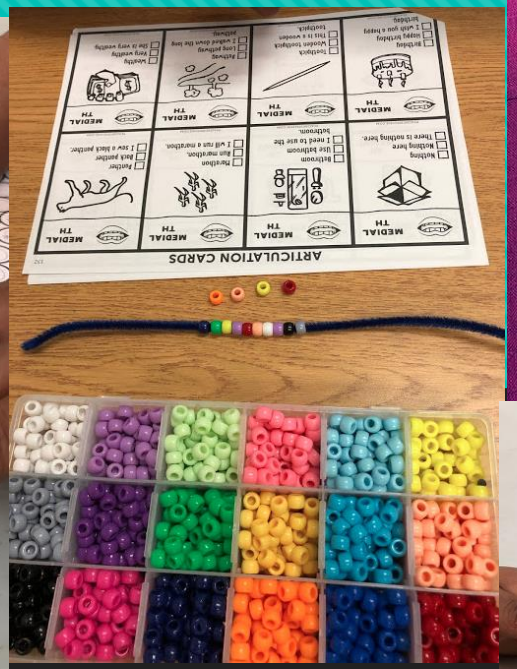


The SLP's Fine Motor Toolbox

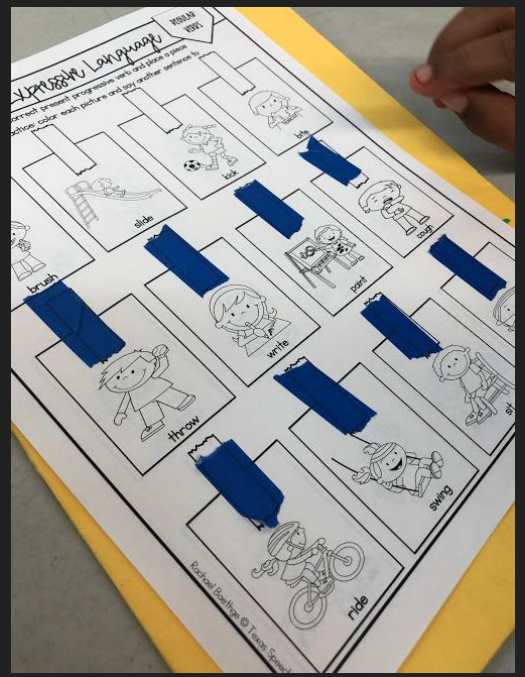
- Pompoms
- Waterbeads
- Plastic Tweezers
- Scissors/Glue**
- Crayons/Markers**
- FUN manipulatives**
- PLAY-Doh**
- Magnets
- Paperclips

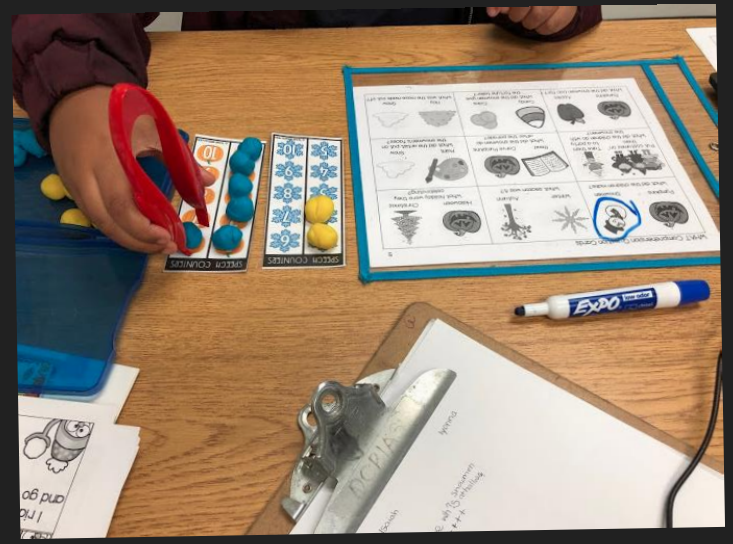

ARTICU
MEDIAL TH WORDS
INSTRUCTIONS
HOW TO SAY THE TH SOUND
Put your tongue between your teeth and blow air between your tongue and teeth.
ARTICULATION CARDS
MEDIAL TH
MEDIAL TH
Bathtub
Clean bathtub
I see a clean bathtub.
Healthy
Healthy food
I eat healthy food.
Move to Archive


BLACK PANTHER
bled
flat
glass
flop
cliff
black
floss
flag
claw
glow
blade
black
blow
plane
glove

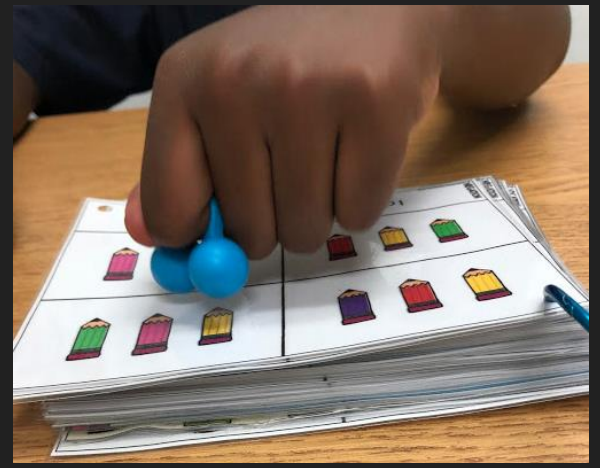

ARTICULATION CARDS

DOT IT Out
DOT IT OUT: cactus
pen+GEAR

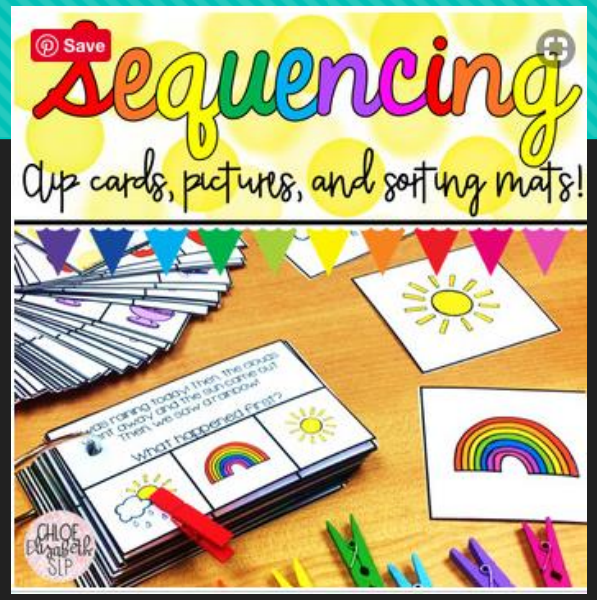

Expressive Language
slide
brush
throw
write
swing
ride

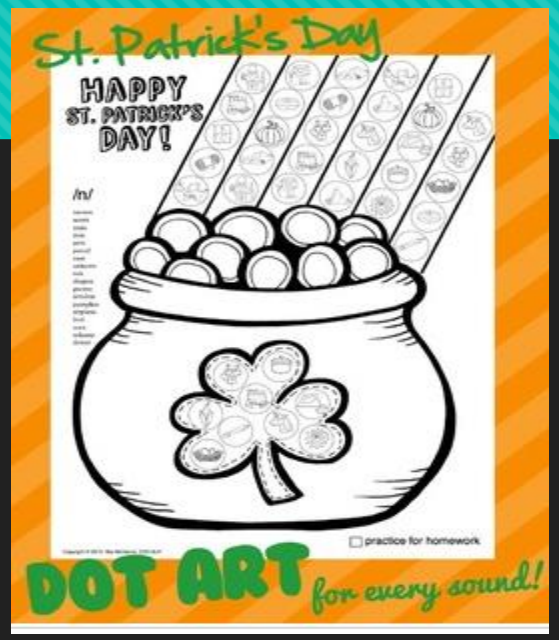

EXPO

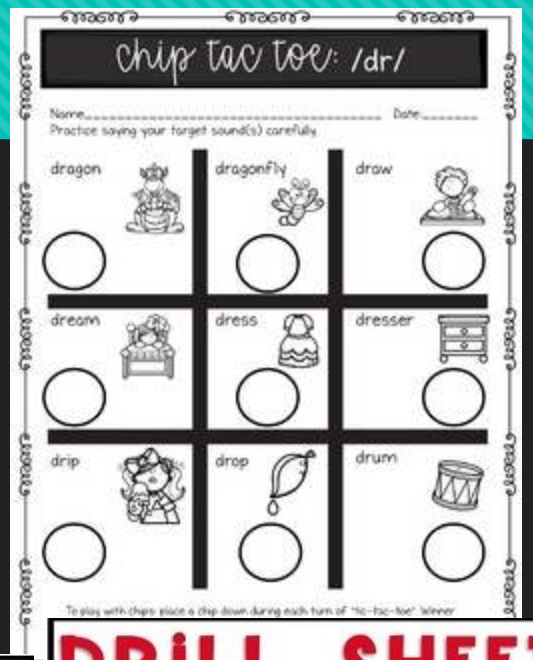
SOUNDS

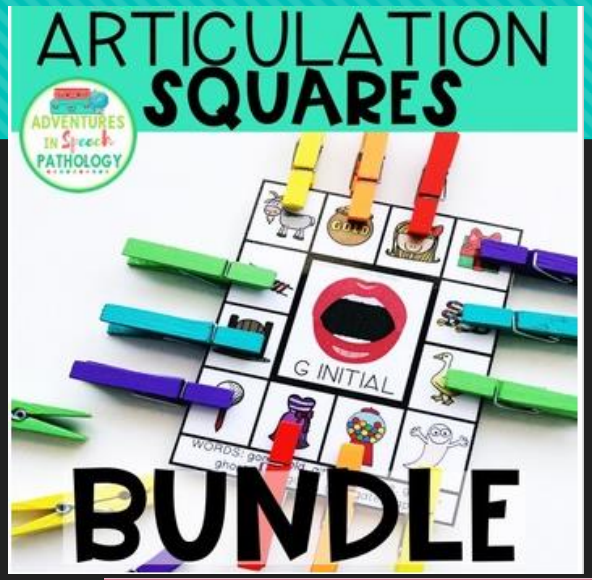


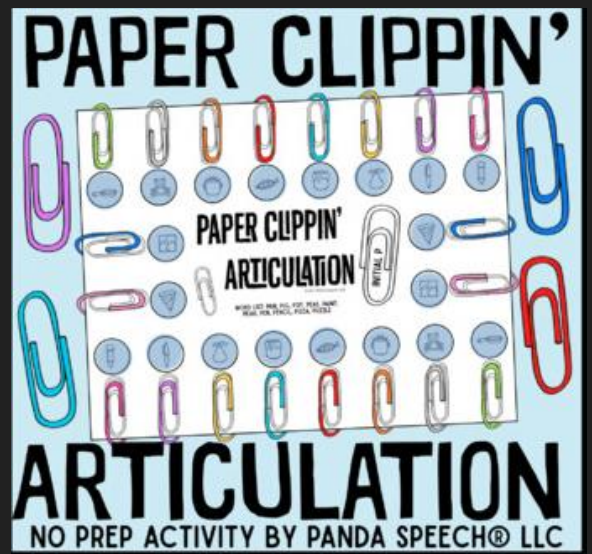
Fine-Motor Activities

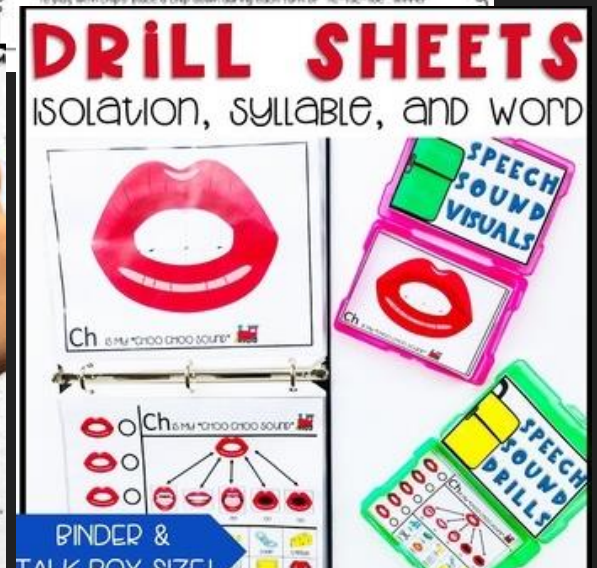


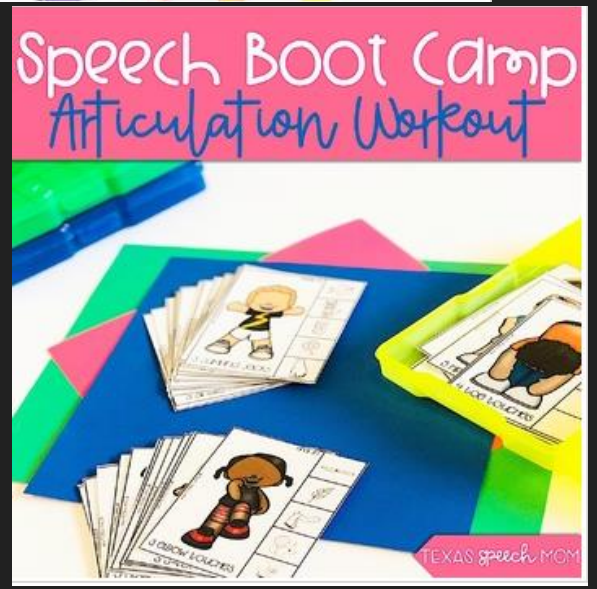




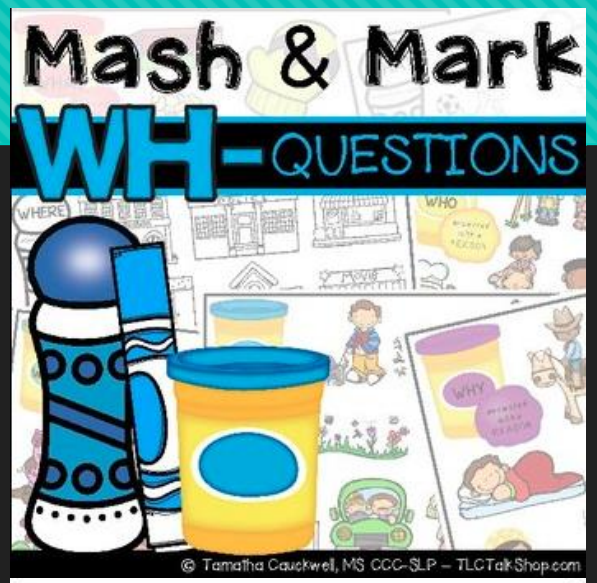


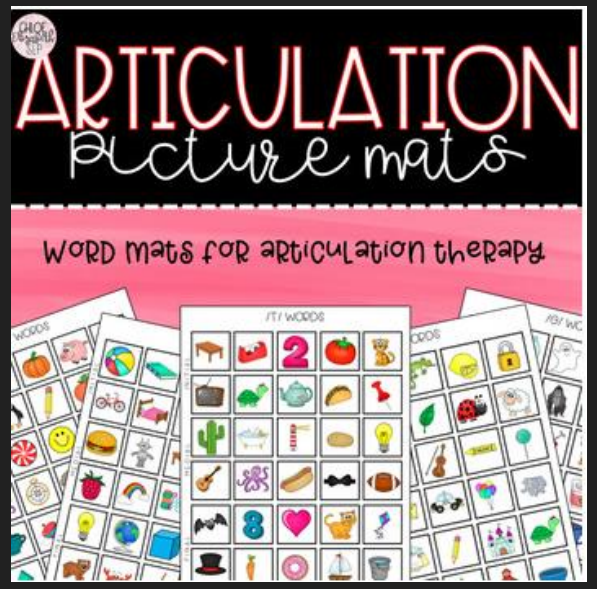


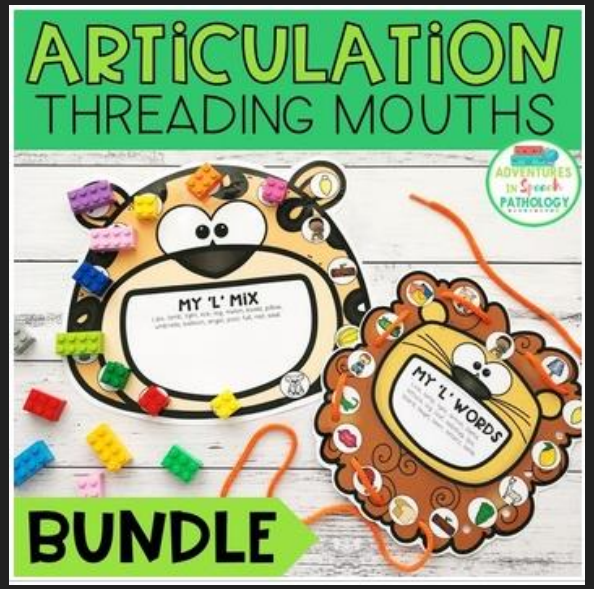


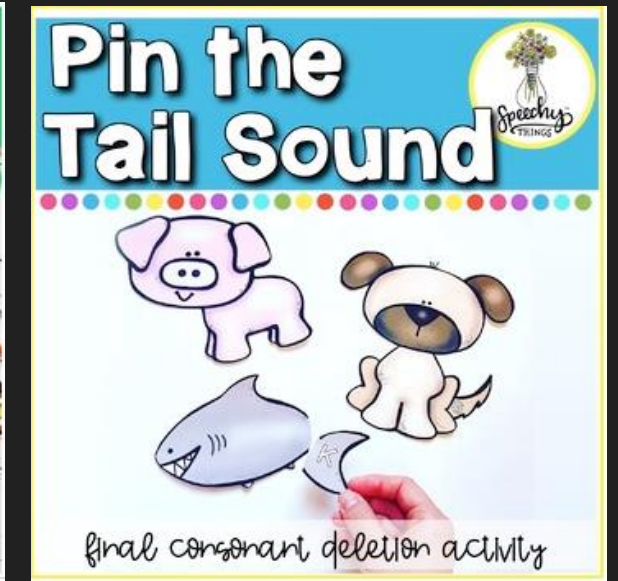


Fine-Motor Activities









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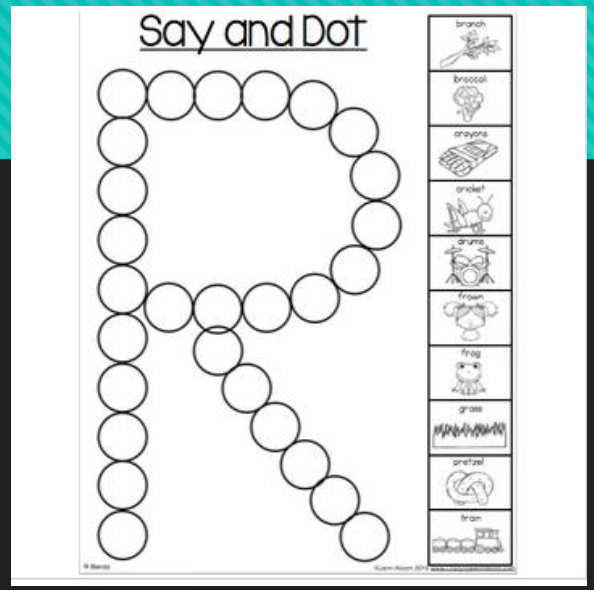
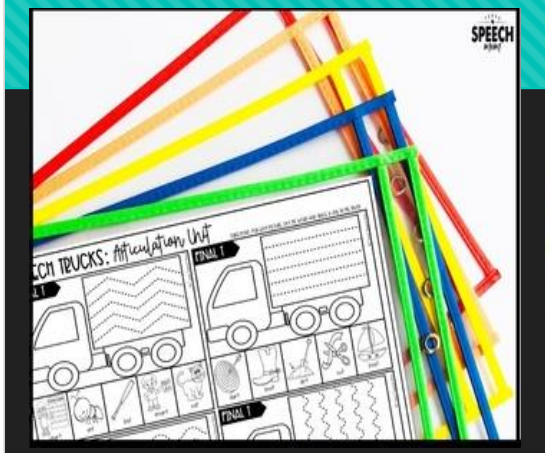
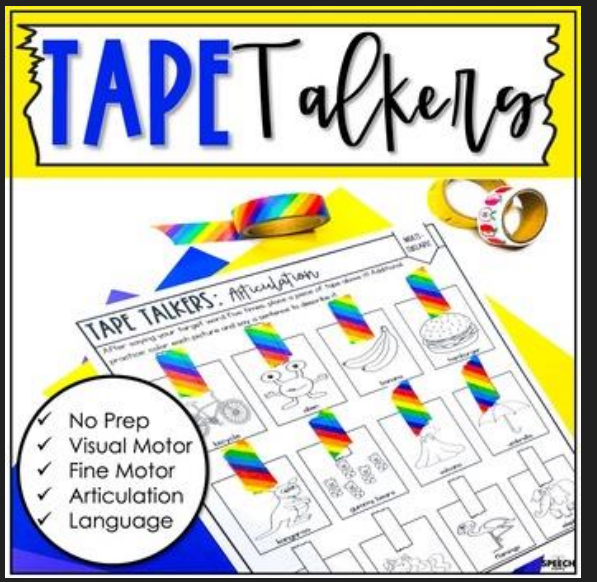
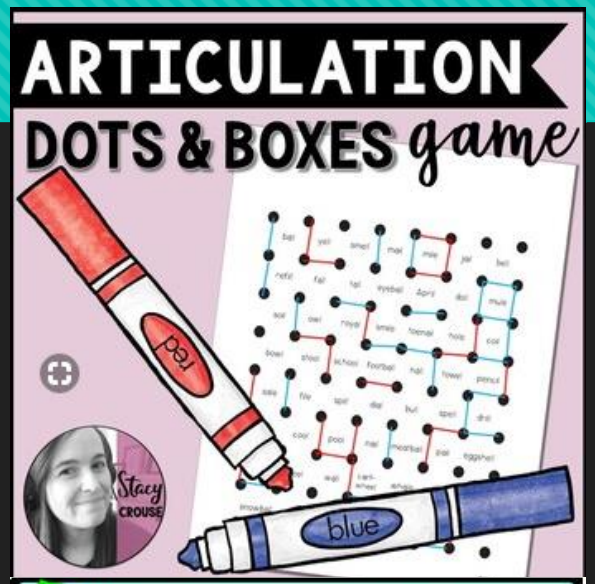
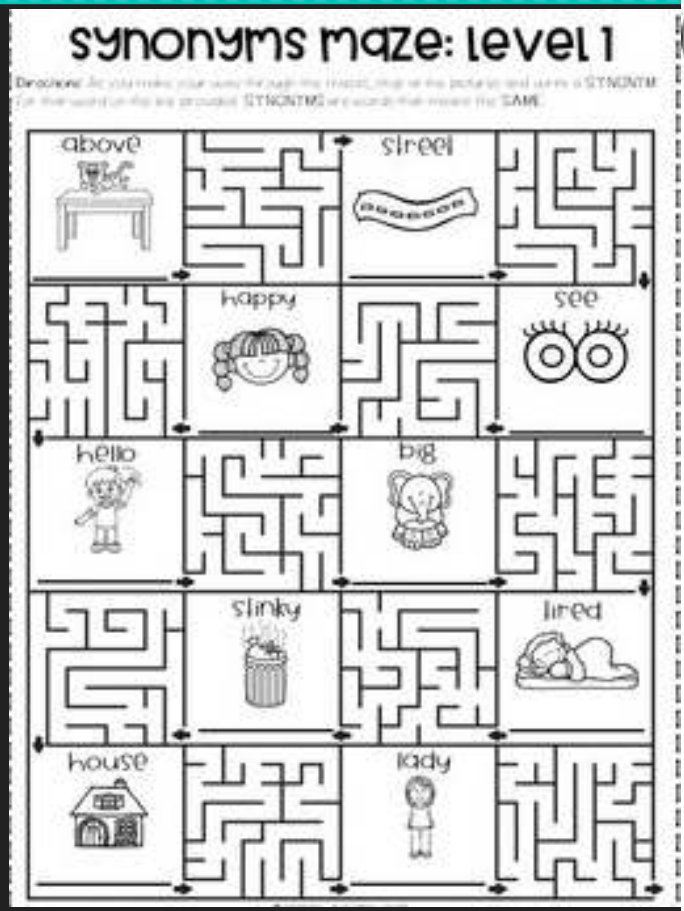


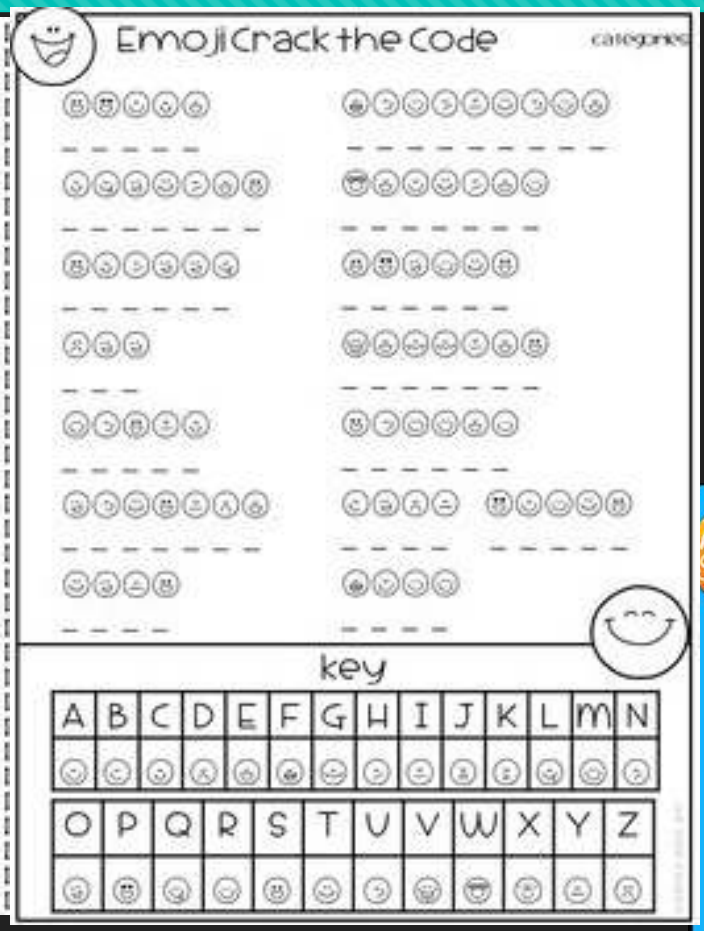


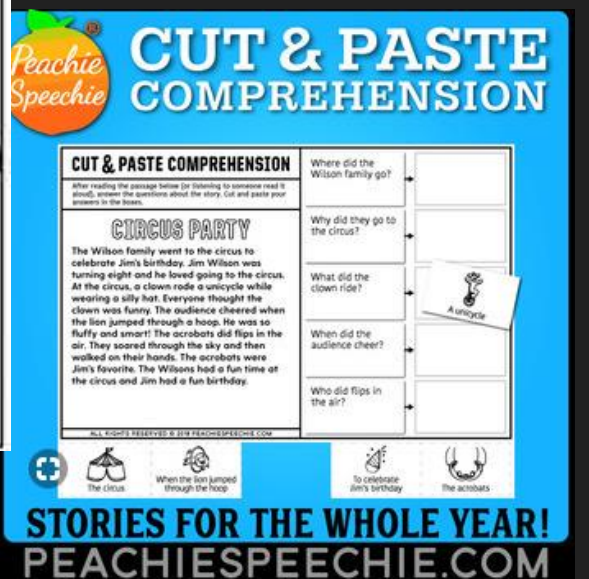


Fine-Motor Activities for Upper Grades









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