



Developing a Program to Train Educators on Red Flags and Remediation for Promoting Normal Development in Elementary Children

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OVERVIEW OF CAPSTONE SITE

St. Andrew's Episcopal School is a private institution that is funded by tuition from the students each year. It is accredited by the Southern Association of Colleges and Schools (SACS) and belongs to the National Association of Independent Schools (NAIS). The average student to teacher ratio in the NAIS is 8.6:1, and the median class size is 15 students. The Lower School population is students ages Pre-K-3 – 4th grade. The curriculum builds on skills introduced in Early Childhood and uses an active, hands-on approach that makes learning exciting, fun, and contagious. A spirited, family-like atmosphere balances the academic, artistic, and social-emotional aspects of education, resulting in happy, self-confident student. The mission of St. Andrews Episcopal School is to nurture a diverse community in the Episcopal tradition, fostering spiritual growth, moral responsibility, academic excellence, and artistic and athletic pursuits, while preparing for a life of service to our community and the world.

LITERATURE SUMMARY

The developmental FOR suggests that development is sequential; therefore, behaviors are influenced by the level or degree in which the individual has grasped and integrated the previous stages (Creek, 2014). St. Andrews uses the developmental FOR in its learning environment by focusing on learning through the development of the child. The school views each child's developmental stages as an individual and offers appropriate guidance and resources to assist in mastering developmental stages.

Pacheco, Gabbard, Ries, Bobbio performed a research study on 100 Brazilian children (ages 8-11 years old) evaluating interlimb Bruininks-Oseretsky Test of Motor Proficiency and the Academic Performance Test. Overall, there was a significant association between academic performance and Body Coordination, specifically Bilateral Coordination.

Handwriting is a complex skill that requires the process of coordinating the eyes, arms, hands, pencil grip, letter formation, and body posture (Handwriting, n.d.). Occupational Therapists observe and assess the mechanisms that are essential for handwriting. The OT will suggest home activities and develop a curriculum with the teachers that supports the development of the skills mentioned, and will eventually translate into good handwriting (Handwriting, n.d.).

NEEDS ASSESSMENT

Created a questionnaire to use in semi-structured interview with capstone mentor

- Identified key needs:
1. Identify OT Red Flags for various grade levels
 2. Create activities to address OT skills while working on academic skills
 3. Create a program with activities for parents to use if unable to receive OT services and for teachers to utilize in their curriculum to strengthen OT related skills

PROJECT GOALS / OBJECTIVES

Design activities for teachers that improve children's fine motor skills, visual-motor, etc. while also incorporating academic skills by the 5th week.

- Create meetings with teachers to determine important OT skills and academic material to include in program

Develop an educational program and sessions for parents and teachers to incorporate into their curriculum or home schedule to improve specific skills by the 10th week.

- Meet with administrators and staff at the school to discuss the most appropriate way to distribute the program.
- Determine the best design or template for user friendliness and simple word usage for easy understanding

The student will measure the effectiveness of the program and activities through program evaluation by the 14th week.

- Post-survey will be distributed to parents and teachers to obtain feedback regarding the usability and efficiency of the program

Red Flags for OT related skills: Fine Motor, Bilateral Coordination, Social Skills, Visual Perception, Sensory Processing (Grades Pre-K-4 – 2nd Grade)

List of easy to perform activities for each OT skill with instructions and pictures

Links to the activities and free printable worksheets

OCCUPATIONAL THERAPY RED FLAGS: PRE-K-4

Occupational therapists work with students on a variety of skills needed to allow them to fully participate throughout all areas of their lives to maximize their development and overall success. The following are "red flags" that may suggest a child would benefit from an OT referral.

Fine Motor: Fine motor skills involve the refined use of the small muscles controlling the hand, fingers and thumb.

- Strif or shaking hand movements
- Unable to cut across a piece of paper
- Unable to copy a cross (X)
- Unable to independently draw a circle or straight line

Bilateral Coordination: Bilateral coordination allows a child to use both sides of the body in partnership to complete everyday activities.

- Switches hand use throughout activity to avoid crossing middle
- Uses one hand for an activity that requires use of two hands
- Demonstrates preference or increased strength in one leg over the other during reciprocal movements like jumping or skipping
- Difficulty coordinating hands during scissor use

Social Skills: Social skills promote positive interaction between peers and adults.

- Unable to initiate or join in play with other students
- Unable to adapt or cope with change in schedule or routine
- Unable to share all at with other students
- Demonstrates increased fear or passiveness with playing with other students

Visual Perception: Visual perception allows the eyes to interpret what is seen into meaningful information.

- Poor hand-eye coordination
- Eyes that are unable to focus on task at hand
- Difficulty sorting colors, shapes, cards

PRE-K-4 FINE MOTOR ACTIVITIES

USE A DOT MARKER TO STAMP REQUESTED LETTER, GREAT ACTIVITY FOR VISUAL DISCRIMINATION BETWEEN LETTERS AND UPPERCASE/LOWERCASE RECOGNITION.

USE DOT MARKER TO FORM SPECIFIC LETTERS OR NUMBERS ON THE DO A DOT WORKSHEETS. BE SURE TO VERNALLY PROMPT CHILDREN TO FORM LETTERS WITH CORRECT STROKE SEQUENCES. ALPHABET DAUBER PAGES CAN BE DONE USING CRAYONS, MARKERS, COLORED PENCILS, PLAYDOUGH BALLS, BUTTONS, ETC.

PLAY DOUGH MAT: MANIPULATE PLAY DOUGH TO FORM UPPERCASE AND LOWERCASE LETTERS, NUMBERS, AND SHAPES. PLAYING WITH PLAYDOUGH HELPS STRENGTHEN LITTLE HANDS TO PREPARE THEM FOR WRITING. PLAYDOUGH IS FUN AND ALLOWS CHILDREN TO BE CREATIVE AND USE THEIR SENSES.

ALPHABET CRAFT: ALL YOU NEED IS BLACK AND WHITE PRINTABLE WORKSHEET, SOMETHING TO COLOR (CRAYONS, MARKERS, COLORED PENCILS, GEL PENS, ETC), SCISSORS, AND GLUE/TAPE. WORK ON STRENGTHENING FINE MOTOR SKILLS & RECOGNIZING UPPERCASE LETTERS IN A FUN, HANDS ON WAY.

SLIP THE ALPHABET PUZZLE IN A PAGE PROTECTOR OR LAMINATE IT AND USE A DRY ERASE MARKER TO COMPLETE. THEN, JUST WIPE CLEAN WITH A PAPER TOWEL AND YOU CAN DO IT AGAIN INCLUDED IN THE ABC PRINTABLE ARE BOTH UPPER AND LOWER CASE LETTERS.

Pre-K4 Activity Worksheets/Resources

For each resource: scroll down to bottom of page to download pdf and print worksheets

1. Activity #1- Letter Identification Dauber Worksheet
<https://www.preschoolplayandlearn.com/letter-recognition-worksheets/>
2. Activity #2- Bingo Dauber Alphabet Worksheet
<https://www.preschoolplayandlearn.com/letter-abc-dot-marker-printables/>
3. Activity #3- Play Dough Mats
<https://www.kindergartenworksheetsandgames.com/free-alphabet-playdough-cards/>
4. Activity #4- Letter Crafts
UPPERCASE: <https://www.preschoolplayandlearn.com/letter-crafts-for-preschoolers/>
Lowercase: <https://www.kindergartenworksheetsandgames.com/lowercase-letter-crafts/>
5. Activity #5- Alphabet Maze
https://www.123homeschool4me.com/free-alphabet-mazes_91/

Scissor Cutting

6. How to hold scissors correctly resource: scroll down to download graphic describing correct and incorrect ways to hold scissors.
<https://thehappyhandwriter.co.za/how-to-hold-scissors-scissor-cutting-for-pre-schoolers/>
7. Fun ways to practice cutting skills
<https://thehappyhandwriter.co.za/free-practice-cutting-worksheets/>

Drawing/Tracing Shapes

<https://www.education.com/worksheets/article/tracing-basic-shapes/>
<https://www.giftedcuriosity.com/product/shapes-practice-worksheets/>

Key components of a pencil grasp with activities to increase FM strength

PENCIL GRASP- SEPARATION OF 2 SIDES OF HAND

The hands are separated into the position with both index, middle, ring, and little finger, and the thumb and pinky are extended to the sides. The hands are then moved together to form a fist. The hands are then moved together to form a fist. The hands are then moved together to form a fist.

PENCIL GRASP- IN-HAND MANIPULATION

The hands are separated into the position with both index, middle, ring, and little finger, and the thumb and pinky are extended to the sides. The hands are then moved together to form a fist. The hands are then moved together to form a fist. The hands are then moved together to form a fist.

PENCIL GRASP- WEB SPACE

The hands are separated into the position with both index, middle, ring, and little finger, and the thumb and pinky are extended to the sides. The hands are then moved together to form a fist. The hands are then moved together to form a fist. The hands are then moved together to form a fist.

PLAN FOR PROJECT EVALUATION

8 Question Post Survey

Participants: 14 teachers

Survey Respondents: 11

Q1 - How likely are you to refer to this Red Flags program and incorporate tips/strategies

into your curriculum?



PROJECT SUMMARY AND FUTURE RECOMMENDATIONS

The Capstone Project aimed to educate teachers and parents on Red Flags in OT related skills (fine motor, bilateral coordination, social skills, and visual perception, and Visual Motor skills) for ages Pre-K -2nd grade. The Red Flags Program was created to provide activities for each skill identified with easy-to-follow instructions to strengthen skills. Also, it provided hyperlinks to free resources and worksheets. The program also provided educational handouts regarding proper development of pencil grasp, scissor progression, benefits of core and shoulder strength to increase handwriting legibility and improve sitting posture. Future research could include determining a method of ensuring all teachers are teaching proper letter formation. Present and educate teachers on how to use Red Flags Screening Tool, continue to work with students in small and individual groups using activities from Red Flags Program, and document feedback and progress using an additional survey.

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