

Developing Printing and Fine Motor Skills

This document offers teachers ideas and suggestions for supporting fine motor skill development and teaching students to print.

Supporting Grade 1

June 2011

In grade one, fine motor skill development builds on the strength and skills developed in Prekindergarten and Kindergarten. The focus at this grade is on the development of an efficient grasp and proper letter formation. In grade one, teachers should use guided and accurate practice with students. The quality, not quantity, of letter formation is important.

Fine motor skills, particularly printing skills, are enhanced by:

- holding and using scissors appropriately to:
 - focus on cutting with precision and accuracy
 - accurately cut complex shapes (such as a star, heart)
 - use the non-dominant hand to support and turn the paper so the hand with the scissors stays in the same general position (scissors pointing away from the body).
- painting to develop directional concepts, slight extensions of hands, and shoulder stability by using:
 - an upright easel to encourage a slight angle of the wrist
 - an increasing amount of detail.
- sitting on unstable surfaces (such as an exercise ball or mushroom stool) to develop trunk stability (see glossary) and strength.
- walking like various animals (crab, seal, bear, inchworm) to develop a child's trunk stability and strength.
- rolling, shaping clay to create detailed items such as balls of various sizes, faces with eyes, ears, mouth and hair, and letters of the alphabet to enhance bilateral hand use and develop hand strength.



Shaping clay

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Developing Printing and Fine Motor Skills is a publication of the Saskatchewan Ministry of Education.

2220 College Ave
REGINA SK CANADA S4P 4V9



Ministry of
Education
www.education.gov.sk.ca

- participating in chair push-ups (while sitting, place hands on seat and lift body up by pushing down with arms) and chair bicycling (while sitting, lift legs up and out to 'peddle' the bike) as a warm-up before fine motor tasks and to build trunk stability.
- developing in-hand manipulation (see glossary) by twirling an object (such as a pencil) using one hand, holding three pennies or beads in one hand, placing each individual object into a container with a small opening.
- spraying bottles (to clean tables or colour snow), washing tables, and wiping white boards to develop hand, arm, and shoulder strength.
- developing an efficient pencil grasp (see page 4).
- forming upper and lower case letters in a consistent, accurate, and efficient manner (i.e., top to bottom, left to right, and counter clockwise letter formation).

Educators in Grade One can support fine motor skill development by:

- modelling correct upper and lower case letter and number formation at all times (top to bottom, left to right, counter clockwise).
- verbalizing the steps and visual cues for proper letter and number formation (i.e., "How many strokes are in this letter?" "Where do you begin the stroke?").
- continuing to develop students' arm and hand strength, and stability of the trunk and shoulder as precursors to fine motor skills.
- storing materials in screw-top and flip top containers so children develop bilateral hand use (see glossary).
- providing children with a pencil to practice printing skills. A variety of tools such as chalk, markers, crayons, paint brushes, etc. can be used by students when doing art or other creative activities.
- providing students with an adequate warm-up prior to printing:
 - chair push – ups while sitting, place hands on seat and lift body up by pushing down with arms.
 - spider push-ups – place palms together, fingers spread apart. Push fingers against each other, extending the fingers so only the fingertips are touching. While applying pressure, collapse hands together so palms are touching. Repeat.
 - Mickey Mouse ears – holding hands up near the top of the head, palms facing outward, open palms wide and tightly squeeze into a fist. Repeat.
 - air printing – practise making large letters in the air with arm extended.

- printing gloves – beginning with the pinky, tightly squeeze and slide each finger of the imaginary long-sleeved printing glove from fingertip to elbow. Repeat for each finger and thumb. Give the forearm a tight squeeze from the wrist to the elbow.



- preparing students for printing by ensuring:
 - feet are flat on the floor
 - knees and hips are at a 90 degree angle
 - table or printing surface is approximately at the height of the elbows when student is seated
 - the paper is set at an angle that follows the same angle of the printing arm.
- promoting efficient grasps (see page 4).
- offering students a variety of ways (such as air printing, wet sponge printing, printing on the chalk or white board) to practice printing and letter formation.
- teaching students self-monitoring skills (such as checklists and rubrics) so posture and letter formation can be self-assessed and self-corrected (i.e., “Are my letters slanted in the right direction?” “Do my letters sit on the line?” “Did I leave enough space between letters and words?”).
- providing visual cues (such as a happy face on the top left corner of the paper) so students know where to start printing.
- grouping similarly formed letters together when introducing new letters (i.e., “tall” letters, basement letters).
- consistently using common language, within and across, grades to describe letter formation (i.e., base line, tall letters, basement letters).
- observing students while they are forming the letters and provide students with detailed and immediate feedback. Remember to be positive!
- expecting students to transfer their printing skills across all subject areas and at all times when they are printing.

Efficient Grasps

There are three widely accepted efficient grasps:

1. Dynamic tripod grasp (a grasp that is emerging for children at this age) - the pencil rests against the middle finger, the index finger and thumb pinch the pencil.



2. Quadrapod grasp – the pencil rests on the ring finger, the middle finger, index finger, and thumb support the pencil.



3. Adapted tripod grasp– the pencil rests between the index and middle fingers, the thumb and index finger support the pencil.



Efficient grasps have:

- wide open web space (see glossary)
- wrist and elbow are stable to support arm movement across the printing surface
- fingers do the moving of the printing tool (see glossary).

Inefficient Grasps

Some examples of inefficient grasps are the:

- thumbwrap – the thumb rests or wraps over the index finger. This often occurs when the hand strength is not strong enough.



- left-handed hook – the left hand is bent forward or flexed at an awkward angle. This grasp often occurs when the student is unable to see what is being written on paper. Teachers should check to ensure that the angle of the paper is aligned with the student's arm and have the student hold the printing tool 1-2 centimetres higher up the shaft of the pencil.



Glossary

Bilateral Hand Use - using two hands together to complete a task. Examples are cutting with scissors and doing up buttons.

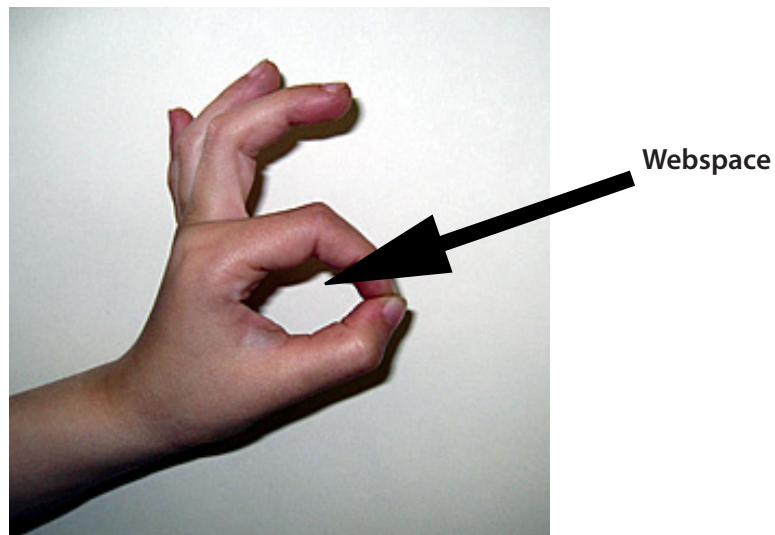
In-hand Manipulation - adjusting an object within the hand as it is being held. Some examples include repositioning fingers on a pencil while holding it and repositioning a coin to insert it into a vending machine slot.

Printing Tool - an item used for making marks such as pencil, pen, crayon, chalk, marker, paint brush, etc.

Trunk Stability - a result of the co-contraction of stomach, back, and shoulder muscles that allow a stable position of the upper body to be held. A stable foundation (trunk and shoulder) is essential for the development of refined and precise fine motor skills.

Webspaces - a rounded opening made by touching the top of the thumb to the tip of the index finger. It is an indicator of stability present in finger joints that is required for efficient pencil use.

Note: Tying laces is an emerging skill that develops between the ages of five and seven.



Special thanks to Prairie Valley School Division's occupational therapists for their contributions to this document.