

The Grasp and Large Arm Movements and Children with Developmental Delay.

All the gross movements associated with early learning require a wide range of hand grasps with which the child can explore their environment. Out of this non-specialized practice comes the ability to recognize what grasp suits what activity: that picking up a glass of water requires one grasp and holding a pencil to write, requires a different one.

Picking Up and Putting In, Banging and Scraping, Scribbling and Drawing on various surfaces with different hand-held tools help to develop and strengthen whole-arm movement. They also help children whose grip is weak or too tight and who have limited practice in moving their wrists to support different grasps. With the support of hand over hand guidance over a period of time children hold a variety of different objects and materials using different grasps. The child learns how strong a grip is needed depending on the size, shape, weight of the object and what is necessary for its disposal in space. Here we distinguish between the 'grasp', which could be a variety of holds, including palmar or whole-hand grasps, and a 'grip' which is the force necessary to hold the object in any grasp.

Banging requires an enormous amount of effort. The child may not have had the experience of the shoulder movements required in lifting their whole arm up and lowering it with controlled force onto a table or drum. The child may drop the hammer or stick because they have not learned how much grip is necessary for the downward movement and to hold on to the stick on impact. Very often a child will have a reasonable fistful grasp with the stick held upright, but the grip may be too tight for the wrist to turn into a better Banging position.

On their own, children may prefer to bang by keeping their elbows on the table and palm facing upwards. This is comfortable and also limits the height from which the hammer can drop! However, when the Facilitator lifts the child's elbows off the table by supporting their upper arms, the wrists naturally swivel round and are lifted up into an angle better suited to a Banging position. The Banging may not be effortful yet, but when their arm is supported above the elbow, the child will have the opportunity to practise Banging with the whole arm.

Scraping, Raking and Scooping require effortful large arm movements and involve a variety of grasps. Using hand-held shoe brushes or bricks or sponges in an open flat palm grasp will help the hand and wrist position for Scraping. As Scraping leads to Scribbling, so the flat bricks or sponges should be changed to a variety of different sticks.

Raking activities require a firm grasp with the palm facing down so that the rake can move the object towards the child's body, or away or at different angles. Scooping and Spooning require the same palm facing down grasp and, as with Raking, different types of grasp and strength of grip can be exercised by varying the materials used. Sticks are a good transition from the transient mark-making of Scraping to the permanent mark-making of Scribbling with a variety of different sized crayons and chalk. The tripod grasp (using the thumb, index and middle fingers) gradually develops as a refinement of the whole hand grasp and may be further refined when the child is learning to hold a finer tool like a pencil or pen in writing.

Jane Blatt (2020)