The Development Of Hand Function, Grasps And Drawing Skills

When children first begin to draw using crayons, pencils or brushes they use a dagger grasp. In a natural developmental sequence they will hold the writing implement in a variety of grasps until they settle on a functional tripod grip for handwriting. The developmental sequence is a result of neurological and physical growth in the child.

As we look below at the development of different grasps and drawing skills we can observe that there is a natural progression as the child’s fine motor skills develop. The complexity of the drawing skills increases as the child develops more control over the pencil or crayon in his or her hand.

### 12 Months to 2 Years
- Development of fine pinch grip and precise release of small objects
- Both hands develop skilled function and work together
- Crayon is held initially in the palm (Palmar Supinate or Dagger grasp pictured right).
  - Movement mainly occurs from shoulder, the arm and hand move as a unit.
  - Makes marks on paper with crayon
  - Vigorous scribble in imitation
  - Scribbles spontaneously
  - Draws a stroke then obliterates by scribbling
  - Imitates drawing a vertical line

### 2 Years To 3 Years
- Crayon or tools may be held across all fingers, with the palm facing down. Digital Pronate grasp (pictured right) movement mainly occurs at the elbow, the forearm and hand move as a unit.
  - Imitates drawing a circle
  - Copies a horizontal line
  - Copies a vertical line
  - Draws 2 or more strokes when attempting to copy a cross

### 3 Years To 4 Years
- The fingers (often all four) are held on the pencil shaft opposite the thumb. Quadropod grasp (pictured top right).
  - Movement can occur from the wrist, the hand moves as a unit with the fingers static.
  - Static Tripod grasp (pictured bottom right).
  - Adjustments to the pencil are made with the opposite hand (3½ - 4 years).
  - Copies a circle
  - Imitates a horizontal cross
  - Imitates a zig zag line
  - Joins two dots
  - Draws a diagonal stroke by following a continuous dotted line
  - Traces over a diamond shape (rounded corners)
  - Draws a man with a head and one other body part e.g. arms, legs
  - Traces and stays on most of the time a 7cm wide horizontal line.

### 4 Years To 6 Years
- Child developing ability to manipulate objects between the fingers and palm and rotate objects with the fingers.
- Uses a Static Tripod grasp (pictured right).
  - Of a pencil consistently
  - Developing fine control to manipulate a pencil
  - The thumb, index and middle fingers work as a unit for precise control of the pencil, the ring and little fingers provide support. Horizontal movement across the page occurs at the wrist elbow and shoulder (4½ to 6 years).
  - Copies a diagonal line, a square, a diagonal cross, circle and triangle
  - Draws a man with a head, arms and legs
  - Colours in a simple picture staying mainly within the lines (no more than 0.6 cm)
  - Draws a man with a head, trunk, arms, legs, feet and three facial features
  - Connects a series of dots to make a simple drawing

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All resources are available from www.pld-literacy.org - See more on page 2.

*Available in Foundation and Cursive fonts.*
It is suggested that it is much easier to introduce and reinforce the proper way to hold a pencil than to try and change an inefficient one later in school life where the child has grown accustomed to using it for several years. It is felt that handwriting difficulties could be avoided in later years if there is an early emphasis on strong fine motor skills, learning how to hold a pencil and regular practice on how to use it.

The goal of a proper pencil grip is that it is stable, comfortable and is able to be moved with the smaller muscles of the fingers rather than the whole hand. One important feature of this type of grip is an open and rounded web space, the space formed by the thumb and index finger. It is much harder to move a pencil with finger movements if that is closed.

There are a number of ways to encourage the right grip. One idea is as follows:

Make ok sign with fingers. Place pencil between thumb and index fingers then drop the middle ring and little fingers under the pencil. The last joint of the middle finger sits next to the index finger so that it can support the underside of the pencil.

Children can be reminded to hold their pencil with their ‘ok’ fingers.

Alternatively the pinch action of the index finger and thumb, with the middle, ring and little fingers tucked into the palm mimics the action of a bird’s pecking beak. Children can be reminded to make the bird’s beak and hold their pencil.

Sometimes children find it hard to keep their middle, ring or little fingers tucked into their palm, often they climb onto the pencil shaft too. Children can try holding a small marble or wishing stone in the palm of their hand as they write to help them maintain the right grip. There are also a large number of commercially available pencil grips that help children hold their pencils correctly as they begin to write.

Another useful activity to practise the right grip is too use extremely short pencils to encourage the child to use finger tips rather than the whole hand. The shaft of the pencil should rest gently in the webspace. Children can check to see if their pencil is ‘lying back on its pillow’

### What Is A GOOD Pencil Grip?

- The pencil shaft is held between pads of index finger and thumb of dominant hand.
- The middle finger sits along side the index finger supporting under the pencil.
- The ring and little fingers curl gently into the palm.
- There is an open, fairly circular web space formed by the thumb and index finger. This is where the pencil shaft will rest.
- Sometimes the pad of the middle finger on the pencil too, this is acceptable if the web space remains open.

### What Is NOT A GOOD Pencil Grip?

- Thumb Wrap
- Thumb Tuck
- Supinate
- Transpalmar
- Interdigital Brace
- Index Grip

See the following pages for more information.

Available in Foundation and Cursive fonts.
**Good Pencil Grip**

What makes it easier?

- Big pieces of paper.
- Big crayons, brushes and markers (larger tools ensure children use the right muscles and hand and finger position for the activity and are less likely to adopt incorrect grasps to control the tool).
- Use thick outlines.
Good Pencil Grip

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