

In-hand manipulation

In-hand manipulation is the ability to hold an object in one hand and move or re-position it without using your other hand or another surface or object to help.

This is an important skill used in many day-to-day tasks at school and at home. For example, positioning a pen or pencil in your hand, picking up coins or maths counters, adjusting paper during cutting, manipulating fiddly items of clothing and fastenings etc.

There are three main types of in-hand manipulation skills:

- **Translation:** Moving an object from your fingertips to your palm or vice versa. For example, moving a coin between your thumb and fingertips before putting in a purse.
- **Shift:** Being able to move an object between the fingertips so that you can position an object in a forward or backward motion. For example, positioning a pencil before writing, moving cards when playing card games or adjusting the position of the paper when cutting.
- **Rotation:** Being able to turn an object with the pads of the fingers and the thumb. For example, removing a small cap from a bottle, rotating a shape to fit into a shape sorter or flipping a pencil around to use the rubber.



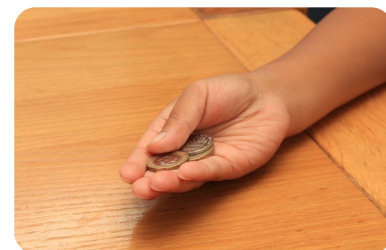
What might you see?

- Finding it tricky to move and control small objects/items within their hand.
- Using part of their bodies (eg chin, chest or their other hand) or work surfaces to help them control the object and get the job done.

Activities to try

Here are some activities you can try to help your child develop in-hand manipulation. Make sure that the child is only using their fingers to move and control the objects. Some children will try to use parts of their body or the table surface to help.

- **Ask them to pick up small objects** (eg small counters, coins or beads) one at a time using only the thumb and index finger, then hide each one in the palm of their hand. Start with 2 to 3 items. Once they can pick up the items, ask them to slide them back down one by one. You can do this while playing games like Connect 4, marbles etc. As they become more confident, make it more difficult by using smaller objects or increasing the number of objects.
- **Practice removing small objects from a purse, bag, or container one at a time**, holding them in the palm of their hand before putting them back. Start with 2 to 3 objects and gradually increase the number.
- **Pick up small beads one at a time** and place on a string to make jewellery.
- **Paint or colour with two colours on cotton buds**, or use a crayon sharpened on both ends so they have to flip from one side to the other.
- **Use the non-dominant hand to hold and adjust items** during cutting activities.
- **Hold a pencil in the writing position**, then walk the fingers up and down the pencil shaft. Repeat a few times.
- **Ask your child to hold 2 to 3 playing cards face up in one hand**. Then ask them to 'fan out' the cards without using their other hand to help, using only the tips of their thumb and fingers.
- **Practice spinning a pencil between their thumb, index and middle fingers** to make it rotate like a windmill, first clockwise then anti-clockwise.

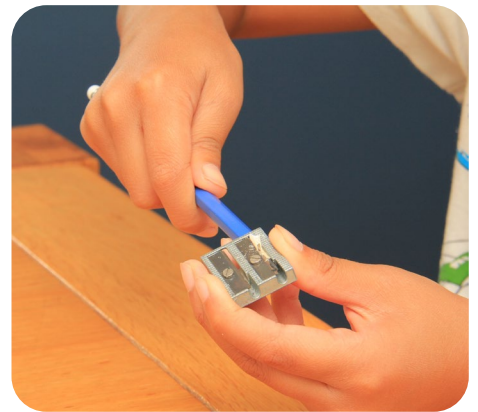


- **Have your child hold a dice in one hand** and move it using their thumb, index and middle finger to display a specific number.
- **Engage in activities such as screwing nuts and bolts** or rolling small balls of Play-Doh or Theraputty using their fingertips.
- **Twist open and close lids on small bottles** using the same hand that's holding the bottle.



Other activities to try

- Play with Lego or small construction toys.
- Use a manual sharpener for sharpening pencils.
- Board games using dice.
- Play with wind-up toys or spinning tops.
- Practice flipping a coin from heads to tails and then posting it into a slot.



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