

Shape Manipulation

What is it? Shape manipulation is the ability to change the way a shape is formed. This includes making it bigger or smaller, only forming part of it or changing its position and/or angle.

Why is it important? Letter formation involves taking bits of shapes and being able to create them in different ways. The more understanding and control children have over changing aspects of the shape, the easier it will be for them to apply this to letter formation.

Stages of Motor Learning

Handwriting is a motor skill, therefore it is important to think about the stages of motor learning that children experience. Initially, children need to go through these stages with the *pencil control concepts*, they then need to start at stage one again to apply it to *letter formation* and then again into *handwriting*.

Stage 1: Thinking about it (cognitive stage)

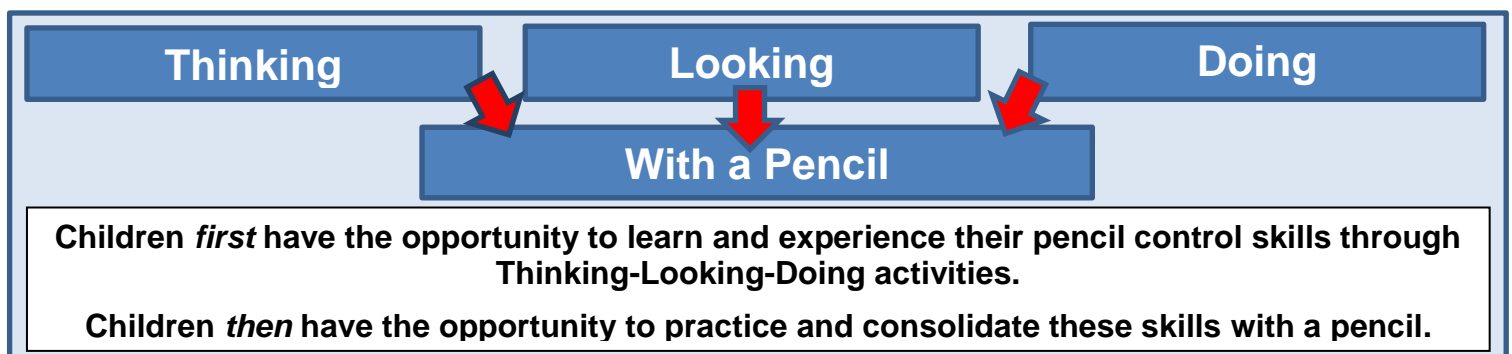
- Children gain understanding and knowledge about different aspects of the skills.
- Activities that can help at this stage are ones that include thinking (asking questions and reflecting), looking (attending to different aspects) and doing (experiencing the movement).
- Feedback is very important. This can be either internal or external, from another child or an adult.

Stage 2: Practising it (associative stage)

- Children rely on their knowledge and previous experiences to refine their skills.
- Repetition **is not the same** thing as practice. Repetition can lead to mistakes that can become embedded and difficult to correct. Practice involves thinking and making changes.
- This stage of learning may take a long time. For handwriting, it is expected that this will take several years.

Stage 3: Doing it automatically (autonomous stage)

- Once children have reached this stage, they are able to focus on **what** they are writing, rather than on **how** they are writing.



How you can support this?

Body Shapes:

- ❖ **Step 1:** Working together, children use their bodies to create different shapes – e.g. three children could make a triangle, each being one of the edges.
- ❖ **Step 2:** Reflecting on the shape made before, think about and create a different shape – e.g. “You have made a triangle. How would you make a square?”

Construction:

- ❖ When shown a photograph/picture of a construction made from bricks, cubes or LEGO®, children to recreate the construction putting individual pieces together.

Dot to Dot Shapes: *Children will need dotted paper*

- ❖ Children to draw a large shape, e.g. square, using the dots.
- ❖ Inside the first shape, children to use the dots to draw a series of smaller shapes, similar to the first, getting smaller and smaller each time.

Guess the shape:

- ❖ Cover up a shape, drawn on a piece of paper or an object.
- ❖ Slowly reveal a bit of the shape and see how quickly children can guess the shape.
- ❖ Do this from different angles to reveal different bits of the shape.

Jigsaws:

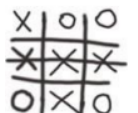
- ❖ Use jigsaws to support children to put different pieces together. Use jigsaws of varying complexity through the number of pieces.

Make a change:

- ❖ Children to make/draw a shape. Adult or children to come up with ideas about how they can change it, e.g. make it bigger, draw only half of it.

Noughts and Crosses:

- ❖ Play noughts and crosses to help children look for patterns and support their planning skills.

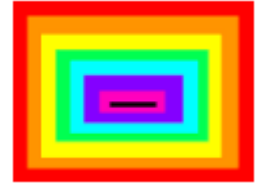


Odd One Out:

- ❖ Children to be provided with a number of shapes. They should all be the same shape, apart from one which is different. Children to identify the odd one out. e.g. *Which shape is different from all of the other shapes? How can you tell?*
- ❖ Position shapes at different angles so that children have to rotate them, either physically or in their heads.

Rainbow Shapes:

- ❖ Children to start with a large shape (e.g. a rectangle) and then draw a series of similar smaller shapes (e.g. rectangles) inside the first shape, each time using different colours and getting smaller and smaller.



Remote Control Car Road:

On a large roll of paper, e.g. wall paper, the adult should draw a road with curves and bends, big enough for a remote control car to fit.

- ❖ Children to drive the remote control car along the road, following the curves and bends.

Spot the Difference:

- ❖ Children to identify the differences in two pictures.

Shape Pictures:

- ❖ Cut out different shapes and use the shapes to make a shape picture.

Walk a Shape: *This is best done in a large space*

Adult to make a shape, e.g. with sticks, cones or beanbags as a 'dot-to-dot'.

- ❖ Children to walk the shape.
- ❖ Children or adult to change something about the shape, then children to walk the shape again.
- ❖ Ask children to describe how the shapes felt different.

Tangram Puzzles:

[NRich website has a simple tangram template which can be used](#)

[Tangram-Channel website contains further examples](#)

- ❖ When shown a picture of a shape, use the smaller shapes to create to picture. e.g. creating a square from the seven smaller shapes.
- ❖ Children to create their own shapes using the seven pieces of the tangram.