

# Schemas

*for parents* Stella Louis

A schema is a repeated action, often seen in the behaviours of babies and young children.

## What is a schema?

From birth, children repeat their actions and behaviours (schema). For example, grasping, lifting, sucking, mouthing, waving and banging are all early schemas.

Children have a natural urge to do the same thing again and again, whether it is throwing things, hiding things all over the house in bags, or emptying all the toys out of the toy box. This repetitive behaviour helps children to develop and deepen their understanding of concepts.



## Why are they important?

Schemas link directly to how the young brain develops and grows. As children repeat their actions they make important connections in their brains, which helps them to modify or make changes to their actions. This is a vitally important element in young children's development and learning.

There are some great ideas in the booklet to help your child learn and engage with their surroundings. As you help them do this be safe and be aware.

## The young brain

Children need opportunities to practise repeatedly what they know and can do, so that what is known becomes better known. Schemas are typical behaviours seen in children as they develop and grow.



Parents can support children by understanding schemas and encouraging children to play and learn in a way that links to the child's schematic interests.

## Schemas and play

Schemas are often seen when babies and young children are given opportunities to lead their own play.



## Schemas and learning

Schemas help us to organise and process our thoughts and feelings. They help us to think. As we get older our schemas do not go away, they just get more and more sophisticated.



## Observing schemas

Knowledge of schemas can help parents to describe in more detail the ways in which their child is approaching learning. You can use this knowledge to help you to understand your child's behaviour.



## Let's go schema spotting

This booklet will help you recognise your child's schema. Some of the different schemas are called:

- Trajectory
- Rotation
- Enveloping
- Enclosing
- Transporting
- Positioning
- Orientation
- Connection and disconnection
- Core and radial



**Trajectory**



## Does your child like to:

- Launch objects across the room?
- Spend all their play time throwing and emptying things out onto the floor?
- Pull tissues out of the box and throw them about?
- Build high structures?
- Jump up and down on furniture?
- Run and whiz down the slide?

## What are they learning?

They are learning about height, speed, distance and how things move. This schema is called **trajectory**.

Provide opportunities for your child to:

- Explore movement through physical activities, play running games (ready, set, go), walk in a straight line or zigzags.
- Run, jump, climb and ride bikes in large outdoor spaces like a garden or park.



**Rotation**

## Does your child like to:

- Turn over their pushchair or ride along toys to play with the wheels?
- Turn everything upside down?
- Take the wheels off their cars and replace them?
- Spin around and around until they are dizzy?
- Spin in your office chair?
- Ride bikes in circles?

## What are they learning?

Through their exploration children develop an understanding of how they and objects turn. This schema is called **rotation**.

Provide opportunities for your child to:

- Turn keys in locks and padlocks, cooking activities involving stirring, whisking and rolling out pastry.
- Construct objects using round parts in wood or recycled materials.



# Transporting

## Does your child like to:

- Move toys, clothes and household items from place to place?
- Put toys into piles and then start new piles?
- Pick things up, carry them about, then leave them in odd places?
- Transport things around in a pram, wheelbarrow or bucket?
- Fill their pockets with lots of toys?

## What are they learning?

Through moving objects or a collection of objects from one place to another, children learn about progressive changes in quantity, adding, taking away and sharing. This schema is called **transporting**.

Provide opportunities for your child to:

- Visit your local parks to collect fir cones, acorns, sticks and conkers.
- Find out how different things are transported, by air, road, rail and sea.

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**Enveloping**

## Does your child like to:

- Dress up in hats, shoes, boots, scarves and belts?
- Post things in envelopes, shoes and pockets?
- Put buckets over their head?
- Cover their face with face paint or make up?
- Paint using layers and layers of paint, fold paintings or scribble on things to cover them up?
- Cover pets with cushions and blankets?

## What are they learning?

They are exploring the idea of completely covering objects, spaces and themselves. This schema is called **enveloping**.

Provide opportunities for your child to:

- Cover themselves with paint, wrap themselves or objects up, and put things into small containers bags or wallets.
- Play with big boxes, bags or tents they can get into, small containers, and use envelopes for them to put things inside.



**Enclosure**



## Does your child like to:

- Make fences, nests and cages for toy animals?
- Create dens?
- Post objects through gaps in the banister, cat flap, behind the radiator and in DVD players?
- Colour around the edges of paper?
- Fill and empty containers?
- Build barricades using cushions or blocks?

## What are they learning?

They are finding out about size, shape, measurement and volume of spaces. This schema is called **enclosure**. Provide opportunities for your child to:

- Build dens using open-ended materials such as long pieces of wood, crates, plastic sheeting, containers, guttering and fabric.
- Make parallel lines using string or blocks and inside them place, sort or arrange objects by type or colour.

A young child with blonde hair, wearing a pink shirt and a colorful beaded necklace, is shown in profile, focused on stacking a tower of smooth, grey and green stones. The child's hands are positioned to balance the stones. The background is a blurred outdoor setting with a body of water and trees. A green semi-transparent banner is at the bottom of the image.

# Positioning

## Does your child like to:

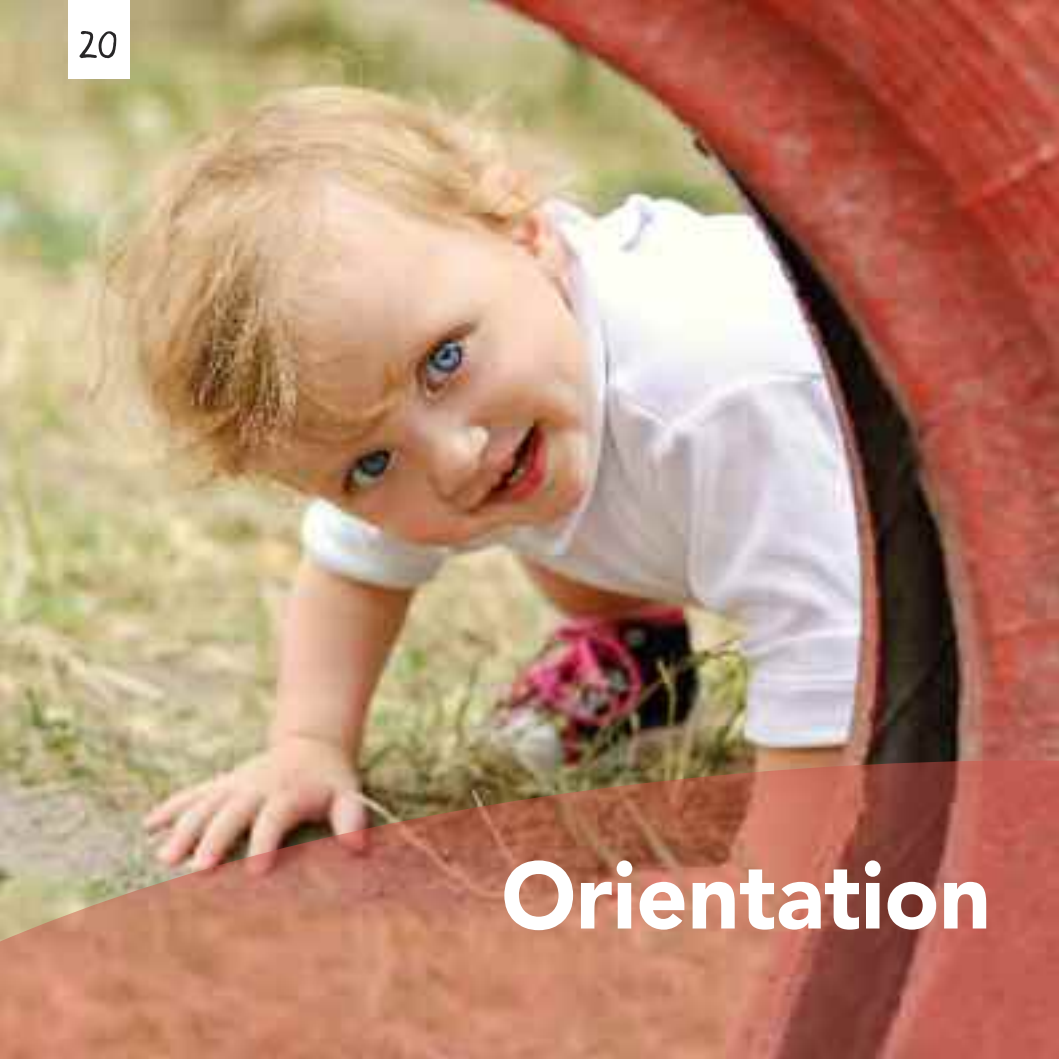
- Line up their toys on top, or next to each other?
- Sort toys into colour, size and type?
- Carefully position marks in paintings and drawings?
- Draw figures in different positions?
- Put their sauce next to, not on top of food?

## What are they learning?

They are learning about order, sequencing, classification, shape, symmetry and one-to-one correspondence. This schema is called **positioning**.

Provide opportunities for your child to:

- Organise objects by type, shape, colour or size in rows to create sets.
- Match objects to numbers, so the number of chairs around the table is the same as the number of plates on the table.



# Orientation

## What are they learning?

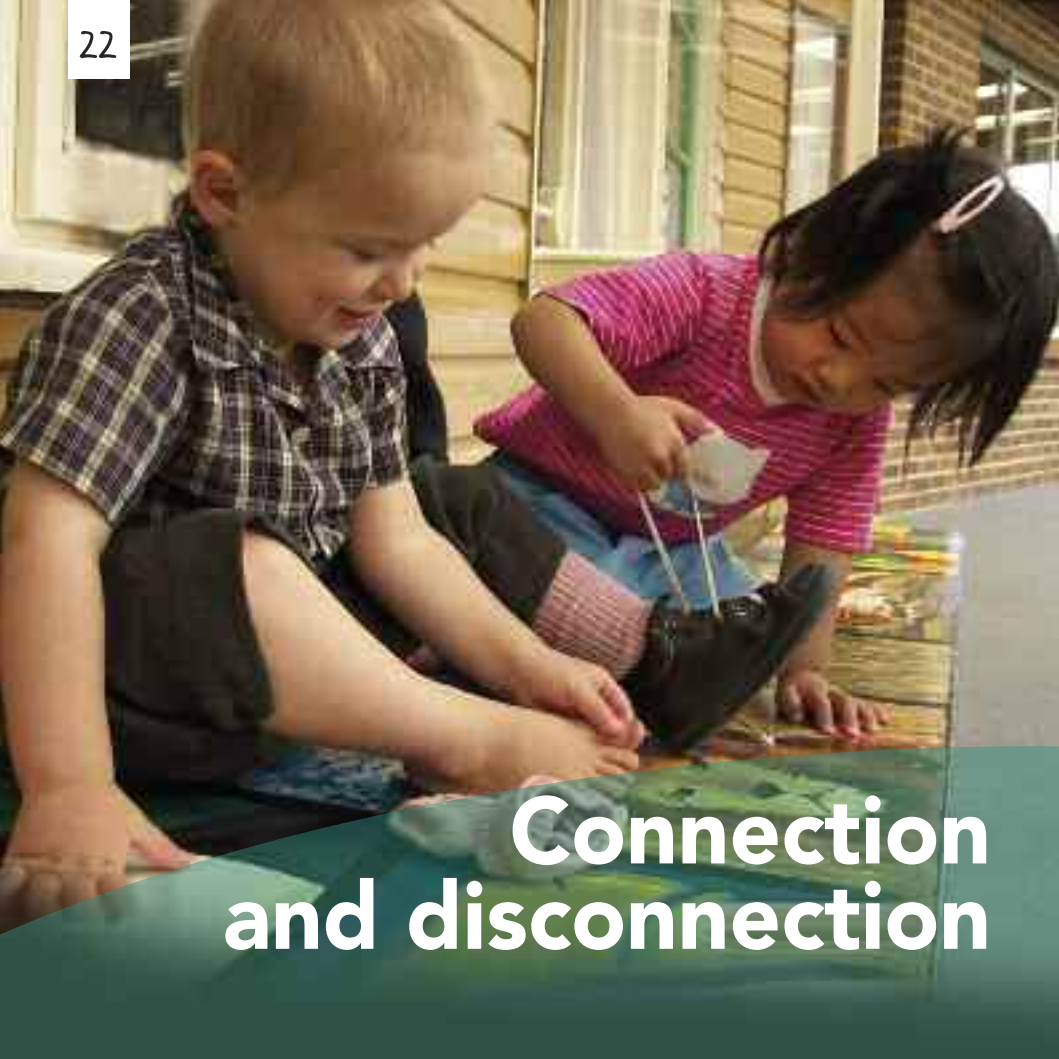
### Does your child like to:

- Hang upside down on the climbing frame or monkey bars?
- Run up the slide and like being at the top?
- Bend over to look at things backwards through their legs?
- Turn everything upside down as they look at it?
- Slide down the banister?
- Rock on a chair?

They are finding out how things look from different angles. They learn about balance, height, weight and width. This schema is called **orientation**.

Provide opportunities for your child to:

- Take photographs, look through binoculars, a telescope or coloured plastic.
- Explore and be active in a large outdoor space, where they can move around, between, under, on top, over and through equipment.



# Connection and disconnection

## Does your child like to:

- Join things together and then take them apart?
- Play with string and wrap it around furniture?
- Take the lid off everything?
- Tie string to bikes and crates?
- Make necklaces and watches with pasta tubes and string?
- Unfasten their seat belt?

## What are they learning?

They are finding out about how to fasten things together using different materials. This schema is called **connection**.

Provide opportunities for your child to:

- Use materials and toys that can be linked, such as clothes pegs, ribbons, locks and chains, tubes, guttering and magnetic toys.
- Play with dough, clay, cutting, gluing and sticking activities, use adhesive tape, masking tape and string.



**Core and radial**



## Does your child like to:

- Draw spiders or animals with horns, tails or trunks?
- Draw fingers, eyelashes, mouths, people or the sun?
- Play with umbrellas inside and out?
- Put sticks into lumps of clay or flags on top of sand castles?
- Construct models of animals?
- Use circles and lines to pretend that they are writing?

## What are they learning?

They are learning how to combine enclosed shapes and lines in their drawings. Drawing circles and lines leads to representations and symbolic drawings. This schema is called **core and radial**.

Provide opportunities for your child to:

- Draw, paint, make props, hats and animal masks.
- Explore things that have lines radiating out from a core.



*“Play is the highest expression of human development in childhood for it alone is the free expression of what is in a child's soul.”*

Friedrich Froebel

## Further reading:

- Early years foundation stage framework (EYFS) (2021)  
Department for Education
- Development Matters (2021) Department for Education
- Birth to 5 Matters (2021) Early Education
- *Understanding schemas in young children. Again! Again!* (2013) Stella Louis, Clare Beswick, Liz Magraw and Lisa Hayes, Edited by Sally Featherstone
- *Schemas and the characteristics of effective learning* (2013) Stella Louis
- *Observing young children* (2014) Tina Bruce, Stella Louis and Georgie McCall
- *Building the Ambition. National Practice Guidance on Early Learning and Care* (2014) Scottish Government

# Schemas *for parents*

Schemas for parents will help you understand how to support the natural development of babies and young children through play. The author, Stella Louis, is an early years specialist with an international reputation as a trainer and consultant.

Stella's research involves sharing her knowledge of young children's schemas with their parents. To find out more about how you can help support your child's early learning, play and development contact your local children's centre or childcare provider.

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“What a gem! This little booklet by Stella Louis on observation using the repetitive schema patterns in the brain will be deeply useful for parents. They will find comfort in seeing that some of the puzzling things their children do can be explained and made acceptable and educationally worthwhile once understood...”

**Professor Tina Bruce, CBE**

