

Children's schemas

Connections to *Aistear* and *Síolta*

Aistear

Themes: Well-being, Identity and Belonging, Communicating, Exploring and Thinking
Guidelines for good practice: Supporting learning and development through assessment (pp.72-102)

Síolta Standards

1: Rights of the Child, C1.1, 1.2, 1.3

6: *Play*, C6.7

7: *Curriculum*, C7.2, 7.6

Research Digests linked to the above *Standards*

What is a schema?

A schema is a repeated pattern of behaviour, actions or thinking.

Schemas are a way of understanding how children's thoughts and actions are linked together. If we observe children carefully, we can see that sometimes there is a common thread running through their actions. When a child has an urge or a preference for one activity, game or a series of similar experiences, for example, dropping items or lining up things, it could mean that he or she is working out or exploring an underlying concept. This may be short-lived, or it may go on for some time.

What do schemas look like in practice?

Supporting children's learning by observing and supporting their schemas helps in the development of positive dispositions for learning, such as curiosity, independence, and perseverance.

One of the earliest schema that can be observed is the **trajectory schema**. As babies move their arms and legs in different ways, and reach out for objects, they are exploring their own ability to move and to influence the world around them. They will repeat actions over and over, for example, he/she may go through a phase of repeatedly dropping objects for the adult to pick up. When we understand that through these actions the baby is assimilating knowledge about how objects move, we can join in the game and understand that it's important for their development.



Children may try out the same action in a variety of different ways and with different objects, for example, playing with wheeled toys, spinning or running and riding bikes around in circles, painting circles or spirals or watching the clothes spin round in the washing machine are all examples of a **rotation schema**.

Children can display clusters of schemas or just one at any given time. Some children can spend a lot of time working through one easily observable schema, while others combine several schemas. For example, toddlers who are intent on moving things from place to place, pushing wheelbarrows or prams around, may be exploring **trajectory** as well as **transporting** schema.

The role of the adult in identifying and supporting schemas

A key part of the adult role in identifying and supporting schema is about observation; watch children as they play, talk to them, see what is engaging them and look closely at what they are doing, especially during child-led activities. Reflect on what you see, discuss with fellow practitioners and parents, and decide how to best support children's schema.



It may take time to identify the schema the child is working through. For example, if we observe a child playing with trains, we need to look closely and see what is happening, and what ideas the child may be exploring at that time. Is the child lining the trains up in rows or sorting them by size? Does the child do this in other contexts or with other objects besides trains? This might suggest that the child is working on a trajectory schema, so we might look at providing props and resources to support that. Does the child also enjoy putting things in boxes, or wrapping them up? Does the child like to wrap him/herself up in blankets, hide in boxes, dens or tents? This suggests an enveloping schema, so we might follow that lead.

When we observe children, identify the schema they are working through and provide resources and experiences to help them work through this pattern of behaviour or thinking, we support brain development and learning.

Some common schemas

Below is a list of common schemas, and a list of materials to deepen and enhance children's play and learning related to each schema. An important task for the adult is to ensure the environment is interesting and varied with lots of open-ended materials. However, it's important to remember when selecting resources to support children's schemas choose items that are appropriate and safe for the age group. Some of the suggestions below will suit all ages, some are more appropriate for babies and toddlers and some for children aged three-to-six years.

Enveloping:

Children who love to cover things up. Dolls wrapped in blankets, items put in bags, items wrapped in cloths, tissues and paper, sleeping bags and items buried in sand or soil.

Provide: fabric, paper, bags, boxes, sticky tape, piles of leaves, sand, clay, tyres, tents, nesting dolls and similar materials for children to wrap items, cover items up and bury items.



Enclosing:

Children who love to make fences to surround things or who like to surround themselves with fences. Toy animals in fields or yards with gates, containers to fill and blocks used to make walls and enclosures.

Provide: blocks, planks, pipes, small metal gates from farms sets, boxes, skipping ropes, tables, blankets and playdough for children to make pens and enclosures for items or for themselves.



Trajectory:

Children who love to make lines. Babies dropping things repeatedly, lining cars or trucks up in lines, bouncing balls, jumping and running, drawing or painting lines.

Provide: items that can be dropped from a height – keys, small toys, cars, trucks and items that can be lined up, mark-making resources, steps, balls for throwing and bouncing, sticks, blocks, hoses, ribbons.

Connecting:

Children who love to join things together. Tying things together with wool or tape, magnetic train sets, skipping ropes, blocks that join together or hoses to connect to taps.

Provide: Duplo/Lego, Stickle Bricks, magnets, nuts and bolts, jigsaws, train tracks, glue, pipe cleaners, Velcro rollers, latches and fasteners, tape and playdough.

Rotation:

Children who like things that spin. Fan blades, propellers, wheels, circles, kaleidoscopes or spinning tops.

Provide: wheeled vehicles, jar lids, cylinders, circles, pastry wheels, water wheels and items with dials (old radio, clocks or toasters).



Transporting:

Children who love to move things from one place to another. Pushing buggies, sit and ride cars and trikes, wheelbarrows.

Provide: wheelbarrows, buggies, trollies, bikes, trailers, suitcases and bags, buckets and baskets.

