

Schema's in Children

What is a schema? A schema is a pattern of behaviour. Children can and generally do have several schemas that they are interested in at any one time, but commonly have one dominant schema that will remain with them into adulthood.

When do schemas begin? Schemas begin from birth. Initially schemas are very simple but they will develop rapidly if they are supported. Research has shown that brain paths develop faster when connections are supported; schemas are a way of supporting children and extending their learning.

How do we know about schemas? Schemas were first identified by Piaget a childhood theorist his work has been further developed by the work of Chris Athey during the 1970's. Additional research has now been undertaken about how children learn and how their brains develop, because schemas follow interests they can develop high levels of concentration and learning in children.

How do schemas work? A child will have an area in which they are mainly interested at any one time. To learn about how this interest works they will repeat an action over and over again until they understand about this interest.

If adults can tune into the child's interest we can support a child to develop their knowledge and extend their interest so further increasing the knowledge.

When a baby is dropping things from a high chair repeatedly they are exploring vertical trajectories or up and down schemas, this can be extended by showing them a yo-yo on a string or lifting them up and down,

It has been known for many years that we learn from doing, when a child is repeating an action they are learning from what they are doing. In addition to repeating an action a child will look for other ways to explore their interest.

When a toddler carries everything to you they may be exploring transporting of items, giving them bags and trucks they can put things in will support this. Extensions can be made by encouraging them to help with the shopping in the supermarket or going on a picnic Older children may become interested in how people are transported and trips could be made to an airport or train station maps could be drawn showing how we get to places. Supporting children in areas they are interested will enable them to continue their interest. Schemas can be seen in children's play and artwork as well as seen in body language and heard in speech.

How many schemas are there? There are many schemas and the following table may help you to recognise and support your child's schema. Children's schemas will grow and develop with them and a dominate schema will still be evident in adulthood.

Schema	Definition	Example	Extension ideas
Transporting	Moving objects from one area to another	Carrying items to a special person. Loading a buggy with lots of items.	Give items that can be moved, Take on picnics or trips to see trains, buses etc transporting people draw maps, follow roads
Assembling	Making piles, or structured arrangements	Lining items up, stacking things randomly or neatly	Use construction items that can be piled such as wooden bricks, Give scarfs etc you are happy to pile.

Positioning	Placing objects / themselves in particular places	Always lining up cars etc, likes to stand at the front or back of a line	Have lots of items that can be lined up, use the interest to practice sorting and positioning language. Make caterpillars or trains etc.
Orientation	Interested in different points of view	Turns items over or looks behind pictures	Show how to balance in different positions such as upside down. Take photos of items from different view points
Dab	Random or specific marks	Interested in making marks such as spots or eyes	Give opportunities to spot with paint. Look for patterns that contain dots and dabs. Look at items such as ladybirds, eyes, flower heads etc.
Horizontal or Vertical trajectory	Interested in either up and down or side to side	Paints in lines, climbs upwards on climbing frames, Throws things	Target practice, Play with ribbons waving them up and down or side to side. Build towers from a variety of materials. Make zebra crossings.
Diagonally	Makes diagonal or zig zag lines	Drawing diagonal lines or pattern boarders	Paper folding activities such as paper planes that require a diagonal fold. Explore slopes, saw wood etc.
Enclosure	Surrounding a border	Plays with farm animals making fences for them	Use lego boards etc to develop building houses. Design borders on paper.
Enveloping	Covering themselves or other items	Hides under blankets, wraps things up paints over pictures	Make dens, have layers of clothing available, practice wrapping presents or putting letters into envelopes. Make houses with roofs.
Core and radials	Making circles and extending with lines from them	Draws spiders or suns,	Look at spiders and other insects in detail, Sit in circles or play circle games.
Rotation	Explores things that turn	Interested in wheels or cogs	Visit roundabouts, roll with rolling pins, explore cogs and water wheels etc.
Connection and separation	Interested in how things join together	Tie knots, take things apart	Make trains and carriages, Look at different types of knots, explore with a stapler and other office materials to join paper together. Use building material that join together such as macarno.