

We Skoolhouse

Learning Schemas



Learning Schemas

Children are natural explorers, constantly making sense of the world around them through play and movement. One of the most powerful ways they do this is through **learning schemas—repeated patterns of behavior that help them build knowledge, develop skills, and refine their understanding of their environment.**

The concept of schemas was first introduced by Swiss psychologist Jean Piaget, who described them as cognitive structures that help individuals organize and interpret information. Later, early childhood researcher Chris Athey expanded on Piaget's work, identifying how schemas manifest in young children's play and learning. Recognizing and supporting these schemas in early childhood is essential for fostering deep, meaningful learning experiences.

Why Are Learning Schemas Important?

- **They Support Cognitive Development:**
 - Schemas are a child's way of testing hypotheses and figuring out cause and effect. For example, a child engaged in a trajectory schema might repeatedly drop objects from a highchair, observing how they fall and testing different variables like weight and speed. This type of exploration lays the foundation for scientific thinking, problem-solving, and early mathematical concepts.
- **They Encourage Holistic Growth:**
 - Learning schemas do not just support cognitive skills—they also help develop fine and gross motor skills, spatial awareness, emotional regulation, and social understanding. A child engaged in a transporting schema might carry objects across the room, unknowingly strengthening their coordination, balance, and organizational skills.



- **They Help Adults Understand Children's Interests and Needs:**

- When parents & teachers observe schemas in action, they gain valuable insight into a child's thinking process and developmental stage. Understanding these patterns can help adults tailor learning environments to meet individual needs, ensuring that play opportunities align with a child's current interests & abilities.

- **They Build a Strong Foundation for Future Learning:**

- Schemas provide the building blocks for later academic concepts. A child engaged in a connecting schema might later develop an interest in engineering, mathematics, or coding. A child fascinated by enclosing and enveloping might develop strong organizational and spatial reasoning skills.



- **They Foster Emotional Security and Confidence:**

- Repetitive play behaviors offer children a sense of predictability and control, which helps them feel safe and confident in their explorations. Allowing children to engage in their preferred schemas without interruption nurtures self-assurance, independence, and problem-solving abilities.

- **They Support Play-Based and Child-Led Learning:**

- Schemas highlight the importance of play as a primary mode of learning. They emphasize that children do not need rigid instruction but rather a thoughtfully prepared environment that allows for open-ended exploration. By recognizing and embracing schemas, educators and caregivers can support a child-led approach to learning, ensuring that development happens naturally and at an appropriate pace.

Trajectory

The trajectory schema involves movement in a straight line, curved path, or through the air. Children engaged in this schema explore how objects and their own bodies move through space. This helps develop spatial awareness, hand-eye coordination, and early physics concepts like cause and effect.



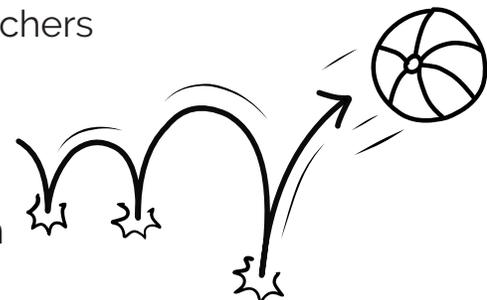
Examples of Play:

- Dropping objects from high places to observe their fall
- Rolling balls down ramps to see how speed and angles affect movement
- Running back and forth, engaging in repetitive motion
- Pouring water from one container to another, observing flow and direction
- Throwing or kicking balls to gauge force and distance
- Swinging on swings, feeling the motion of forward and backward movement
- Jumping in puddles to see water splash and ripple outward



Materials to Support:

- Ramps and tubes for experimenting with movement
- Water play stations with pouring tools such as funnels & pitchers
- Balls of different sizes and weights to explore motion
- Scarves or ribbons for movement
- Toy cars and tracks for hands-on experimentation
- Swing sets, slides, and seesaws for gross motor exploration
- Puddle suits and rain boots for outdoor water play



Transporting

Children engaged in this schema enjoy moving objects from one place to another. This helps them understand organization, categorization, and spatial reasoning while developing gross and fine motor skills.



Examples of Play:

- Carrying toys, blocks, or natural objects in bags or containers
- Filling and emptying buckets, testing capacity and balance
- Pushing carts, wheelbarrows, or strollers to transport materials
- Moving objects between locations, building connections between spaces
- Collecting and redistributing items like leaves, rocks, or stuffed animals



Materials to Support:

- Containers and scoopers for sensory play (e.g. water, sand) and material manipulation
- Small baskets, bags, buckets, and backpacks for carrying items
- Wagons and wheelbarrows to support larger transport activities
- Toy shopping carts for pretend play and real-world connections
- Large blocks or loose parts for building and moving
- Tongs and tweezers for fine motor transporting activities



Enveloping

This schema involves covering, wrapping, or hiding objects (or themselves) in layers. It supports spatial awareness, comfort-seeking behaviors, and problem-solving as children test different ways to enclose things.



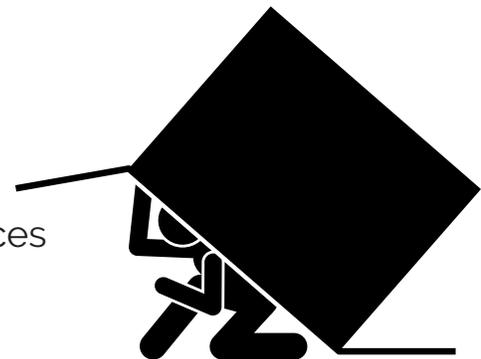
Examples of Play:

- Wrapping dolls, stuffed animals, or objects in blankets
- Creating nests for toy animals or building forts out of pillows
- Covering hands or toys with fabric, playdough, or sand
- Hiding in boxes, under tables, or inside tents
- Dressing in layers of clothing, experimenting with self-care skills
- Using scarves to wrap around their own body for comfort or play



Materials to Support:

- Scarves and fabric swatches for wrapping and draping
- Dolls and blankets to practice care and comfort behaviors
- Play silks for creative and imaginative play
- Cardboard boxes and tunnels for immersive hiding experiences
- Playdough and kinetic sand for sensory covering activities
- Sleeping bags or cozy nooks for self-enveloping play



Enclosing

Children engaged in this schema create boundaries around themselves or objects, helping them understand containment, space, and defined areas.



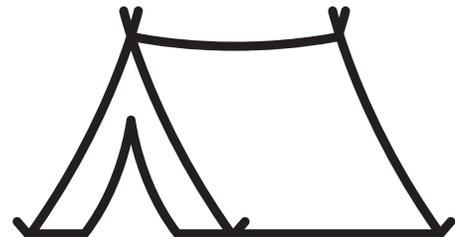
Examples of Play:

- Building fences around toy animals to create enclosures
- Drawing circles or squares around objects to define space
- Sitting in boxes or hula hoops to create a personal area
- Arranging blocks to form enclosed spaces
- Creating forts or enclosed dens using cushions and blankets



Materials to Support:

- Cardboard boxes or tunnels to promote concepts of containment and boundaries
- Containers and small-world play items for organizing enclosed spaces
- Blocks for building enclosures, forts, or small worlds
- Hula hoops to create defined personal spaces
- Playpens or small tents for self-contained play
- Tape or string for mapping out play areas
- Fabric or cardboard panels for fort-building activities



Connecting

This schema involves joining objects together or taking them apart. It fosters problem-solving, coordination, and an early understanding of mechanics and engineering.



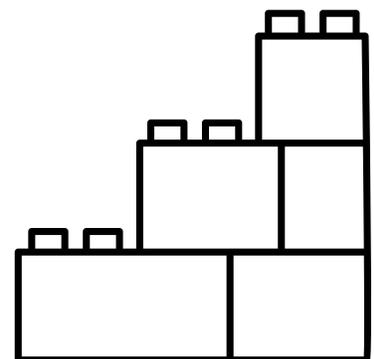
Examples of Play:

- Clicking together interlocking bricks to create structures
- Linking chains or building tracks to form a continuous path
- Tying strings or ribbons together, experimenting with knots and loops
- Using tape, glue, or connectors to attach materials
- Sticking and unsticking Velcro pieces to explore adhesion



Materials to Support:

- Building blocks (Lego, Magnatiles, Duplo) for interlocking play
- Pipe cleaners and Velcro strips for hands-on manipulation
- String, tape, and glue for crafting and constructing
- Train tracks and connectors for spatial understanding
- Snap-together toys to develop dexterity and problem-solving
- Nuts, bolts, and gears for early engineering exploration



Rotational

The rotational schema involves exploring circular motion and spinning, whether by spinning the body or objects. It aids in developing balance, coordination, and an understanding of rotation and symmetry.



Examples of Play:

- Spinning wheels, tops, or themselves to experience centrifugal force
- Rolling balls or tires to understand motion and direction
- Turning door handles or knobs to test function
- Twisting ribbons or fabrics to explore movement
- Riding on merry-go-rounds or spinning seats



Materials to Support:

- Spinning tops, fidget spinners, and wheels for focused rotational play
- Gears and cogs for hands-on mechanical exploration
- Ribbons and streamers for dancing and movement play
- Balls of different sizes to explore rolling and turning
- Bikes and tricycles to experience controlled rotation
- Lazy Susan turntables for exploratory spinning activities



Positioning

This schema involves arranging objects in specific orders, sequences, or patterns. It helps develop an understanding of categorization, symmetry, and spatial relationships.



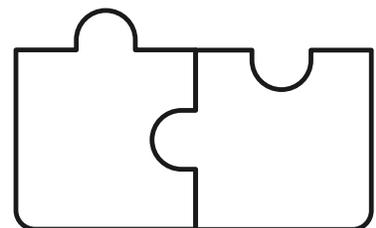
Examples of Play:

- Lining up toys, blocks, or other objects in neat rows
- Organizing materials by size, color, or shape
- Stacking items in a particular order and adjusting their position repeatedly
- Placing objects in symmetrical or repeating patterns



Materials to Support:

- Loose parts like buttons, beads, pebbles, and twigs for arranging
- Pattern blocks and sorting trays for categorization
- Puzzles to explore concepts of spatial reasoning
- Stacking rings and nesting cups for sequencing
- Magnetic tiles and dominos for structured placement play



Orientation

This schema involves exploring different perspectives, viewpoints, and angles with an interest in the spatial arrangement of objects and themselves in relation to their surroundings. It supports balance, coordination, and spatial reasoning.



Examples of Play:

- Hanging upside down from playground equipment
- Looking through their legs or tilting their head at different angles
- Climbing onto furniture to gain a new viewpoint
- Rotating objects to observe how they look from different perspectives
- Arranging objects in different patterns or rows



Materials to Support:

- Mirrors and magnifying glasses for perspective exploration
- Climbing structures, ramps, and tunnels for varying viewpoints
- Binoculars and kaleidoscopes for altered visual perspectives
- Balance boards and wobble cushions for body orientation experiments



Transformation

This schema involves changing or altering objects and materials to explore how their properties, form, or function can shift. Children may mix substances, combine parts, fold paper, melt ice, or disassemble items to see what happens. It supports creativity, problem-solving, scientific thinking, and understanding cause and effect, while also building fine motor skills and persistence.



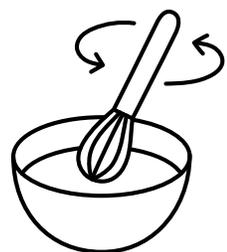
Examples of Play:

- Mixing sand and water to create mud
- Adding paint colors together to see the new color that forms
- Wrapping and unwrapping objects in fabric, paper, or foil
- Melting ice cubes in the sun or with warm water
- Taking apart items (like old electronics, cardboard boxes, or toys) to see the inside parts and reassembling or repurposing them



Materials to Support:

- Playdough, clay, and natural materials for molding and reshaping
- Water tables with food coloring, scoops, and containers for mixing
- Ice cubes, warm water, and salt for melting experiments
- Old cardboard boxes, fabric scraps, & loose parts for altering & rebuilding
- Safe tools for dismantling and reassembling objects (child-safe screwdrivers, nuts and bolts, snap-together toys)



Common Misconceptions & FAQ's with Schemas

- **Schemas Are Not Learning Styles:** Schemas are behavioral patterns that emerge naturally in play, not fixed learning preferences.
- **Schemas Are Not One-Size-Fits-All:** Not every child will engage with every schema, and that's normal. Interests and developmental needs vary.
- **Schemas Are Not Sole Indicators of Autism:** While repetitive behaviors can be present in both schema play and autism, schema play is flexible and evolves. If a child's repetitive actions seem rigid, distress-driven, or interfere with daily life, further observation may be needed.



- **Can a Child Have Multiple Schemas?**
 - Yes! Children often display multiple schemas at once. A child may throw (trajectory), gather objects (transporting), and build structures (enclosing) all in the same play session.
- **What If a Child Doesn't Show a Specific Schema?**
 - That's completely normal. Not all children exhibit every schema, and their play interests may shift over time. The absence of a particular schema is not a concern.
- **When Is Schema Play a Red Flag?**
 - If the play is rigid, repetitive, and lacks variation over time.
 - If the child becomes distressed when unable to engage in a specific schema.
 - If the behavior disrupts social interactions or daily activities.

How to Support Schema Play

- **Prioritize Child-Led Play**

- Allow children ample time to play freely without adult-imposed structure.
- Avoid interrupting their exploration; instead, observe and follow their lead.
- Recognize that learning happens through repetition—children need time to revisit and refine their play patterns.

- **Offer Open-Ended Materials**

- Open-ended materials allow for flexible exploration across multiple schemas. Examples include:
 - Loose parts (stones, shells, buttons) for transporting, positioning, and enclosing.
 - Blocks and construction sets for connecting, enclosing, and orientation.
 - Scarves and fabric for enveloping, wrapping, and movement play.
 - Water, sand, and sensory bins for pouring, trajectory, and transformation play.

- **Observe and Extend Play**

- Pay attention to repeated actions to identify a child's schema.
- Once recognized, provide additional materials to deepen exploration. Example: A child repeatedly dropping objects (trajectory schema) might enjoy ramps, wind tunnels, or water play.

- **Create a Flexible Environment**

- Indoor spaces: Offer accessible shelves with a variety of materials that children can choose freely.
- Outdoor spaces: Provide opportunities for gross motor play (climbing, swinging, running) to support schemas like trajectory and orientation.
- Dedicated areas: Have cozy nooks for enveloping and enclosing schemas, open areas for movement-based schemas, and tables for construction and positioning.

- **Support Social and Emotional Growth Through Schemas**

- Play schemas are a way for children to process emotions. Enveloping play can be comforting, while trajectory play can release energy.
- Encourage peer collaboration by providing materials that naturally invite cooperative schema play, such as large-scale building materials or group sensory experiences.



MADE FOR CHILDREN. DESIGNED FOR YOU.

Proprietary and confidential content of We Skoolhouse LLC. Intended for recipient use only. Do not reproduce, distribute, and/or adapt any part of the content. All rights reserved. Copyright We Skoolhouse LLC

[Weskoolhouse.com](https://www.weskoolhouse.com)



All Rights Reserved