## Loose Parts and Intelligent Playthings Categorized By Schema

<table>
<thead>
<tr>
<th>If your child loves: (S)He may be exploring</th>
<th>Loose Parts</th>
<th>Natural Loose parts</th>
<th>Large play</th>
<th>Recyclable/ Repurposed</th>
<th>Additional tools/ bases</th>
<th>Commercial Toys/ Gifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Train sets, buckles, Lego, harnesses, fridge magnets, stickers, marker caps, shoes</td>
<td>Connecting</td>
<td>Popsicle sticks, match sticks, golf trees, paper clips, binder rings, carabiners, felt pieces, tissue paper pieces, elastic, fabric, paper, burlap, balsa wood, post-its, labels, glow stick bracelets, pipe cleaners, belts, Velcro hair rollers, corks, pins, box rivets, screws, nails, binder clips</td>
<td>Earth magnets, chick weed, vines, spruce sap (for glue), beggar ticks, burdocks, cicada shells, thistle flowers, leather cord, dandelion stems (for chains), dried bones, wet leaves, sand, snow, ice</td>
<td>Log rounds or stumps for stacking, tires, boards, wooden spoons, ropes, webbing, lumber, palettes, logs</td>
<td>containers with lids, bread clips, pvc pipes, nuts and bolts, electrical wires, marettes, twist ties, buckles and snaps from discarded items, broccoli elastics</td>
<td>Hammer, Tape, glue, twine, rope, yarn, bungee cords, hooks, chains, Velcro, cable ties, latches and fasteners, tongs, webbing, flannel, stapler, safety pins, contact paper, magnetic surface, corkboard</td>
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<tr>
<td>Airplanes, car crashes, balls, sharks, birds, Superman, throwing toys, throwing food, jumping off things, knocking things down, expressive art, basketball, bubbles, explosions</td>
<td>Trajectory</td>
<td>Paper, pompons, rubber bands, balloons, corks, beanbags, spoons, rulers, ping pong balls, string, ribbons, cotton balls, felt balls, koosh balls, pieces of foam, sponges, pillows, boards and cylinders (for catapults), tea pot, watering can</td>
<td>Helicopter pods, feathers, leaves, flat rocks for skipping, stones for tossing into water, sticks, pinecones, Y-shaped branches (for slingshot), swinging vines, live insects, cottonwood fluff, dandelions, bursting wild snapdragon pods, snowballs, sticks as fishing poles, palm branches</td>
<td>Planks, cable spool, skate ramp, platforms, ladder, chairs, yoga ball, slide, sled, rain gutters, a pair of trees and physio band for giant slingshot, pliable birches (for swinging), pool noodles</td>
<td>Pipes, scarves, plastic bottles (for rockets), paper towel tubes, broccoli elastics, springs, plastic spoons, buckets for ball toss, boxes for crash zone, inner tubes, film canisters, boxes and cartons for knocking down</td>
<td>Hammers, saws, mortar and pestle, targets, hoops, mini zip lines, fans, launch pad, balcony, Antacids and vinegar for rockets or &quot;pop the top&quot;</td>
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<td>Forts, hide and seek, putting toys to bed, burying items in sand, wrapping presents, eggs and nests, hats, being inside cupboards, painting entire canvas, Lego enclosures</td>
<td>Enclosing/ Enveloping</td>
<td>Scarves, fabric, lace, towels, boxes, spoons, paper towels, tissue paper, mailer tubes, solo cups, aluminum foil, foam pieces, folding steamer basket, plastic Easter eggs, locks and keys, hinges, hair rollers, sponges, nesting baskets, tissue paper, ribbons, yarn, plaster cloth, cheese cloth, toilet paper, Claycrete paper mache, Paperclay</td>
<td>Piles of leaves, sand, mud, clay, walnut halves, clam shells, pine spils, dirt, palm branches, geodes, seed pods, flowers, petals, straw, pea stone, twigs, nests, hollow logs, leather hides, birch bark, hallowed or halved coconut shells, pumpkins, gourds</td>
<td>Cardboard boxes, stacks of tires, tents, long tree limbs (for forts), blankets, tarps, tables, chairs, couch cushions, pallets, cylindrical concrete forms, plastic culverters, haystacks, ball pit</td>
<td>Fabric remnants, old hats and shawls, belts, watches, plastic containers, cups, electrical wire, cardboard tubes, egg cartons, envelope discs from card stores, wrapping paper, newsprint, magazines, bubble wrap</td>
<td>Clothes pins, safety pins, rubber bands, string, tape, Velcro tape, twist ties, magnifying glass, Washi tape, Mod Podge, Silly Putty</td>
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<td>Elevators, balls, towers, dropping objects on purpose, scribbling up and down, building tall towers</td>
<td>Dynamic Vertical</td>
<td>Scarves, beanbags, pompons, cushions, string, rope, spoons, beads, foam balls, ping-pong balls, corks, wire, bean bags, watering can, tea pot, slinky, confetti, blocks for stacking, spoons, paper clips, dice, dominos, light switches, chains, springs, barrel bolts</td>
<td>Rocks for stacking, pinecones, water, feathers, sticks, helicopter pods, leaves, acorns, crab apples, hanging vines, icicles, palm branches, wood pieces for stacking</td>
<td>Stacks of tires, platforms, chairs, ladders, walls, tree trunks, fences, couch cushions, cylindrical concrete forms, trampoline, dumbwaiter, fireman pole, deep hole</td>
<td>PVC pipes, wrapping tube, Pringles chip containers, K-cups, yogurt cups, cans, zippers, tissue boxes, Yop bottles, solo cups, empty boxes, straws, coiled telephone cords</td>
<td>Plumb line, retractable tape measure, pulleys and ropes with bucket, small hand winch, mashers, mortar and pestle, funnel, turkey baster, hour glass, thermometer</td>
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<td>Putting trucks upside down, turning knobs on stereo/ appliances, planets, baseball, racetracks, CD’s, launching toys that roll, spinning in circles, washing machines</td>
<td>Rotation</td>
<td>Jacks, plates, pot lids, wood rings, spoons, washers, metal rings, rope, string, lasso, sticks, toilet plungers, paper towel holders, cylindrical blocks, short length of pipe, nuts and bolts, screws, martini umbrellas, metal bearings, mixing spoons, whiskas, hair rollers, loops of tubing or pipes, serger spoons, bobbins, paint roller, hinges</td>
<td>Helicopter pods, swinging vines, rolly pollies, daisies, snowballs, tree rounds with a centre hole, acorns, snail shells, coconut shells, water, stepping stones or stumps arranged in a circle, hills for rolling down</td>
<td>Cylindrical concrete form, plastic culvert pipes, swings, cable spools, hay bales, freestanding poles and trunks for circling, hula hoop, pop-up hamper or tunnel, merry-go-round, barrel</td>
<td>Cylindrical containers, paper tubes, old microwave trays/ tracks, bottles, castors, motors, knobs off old appliances, roller blade wheels &amp; bolts, cups, spinners from board games, turn table, round cardboard from frozen pizza, paper plates</td>
<td>large round bowls, steel drum, fan, compasses, winch, pottery wheels, lazy susan, rotating organizer, salad spinner, dowels and sticks, hamster wheel, clothes for toy washing machine, drill, screwdriver, auger, mixer, blender</td>
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<td>Making holes in things, poking with sticks, putting fingers in holes, arrows and bullets, swords, ice fishing, sewing, earrings, destroying safety gates, putting limbs through bars of railings</td>
<td>Going through a barrier</td>
<td>Yarn and plastic needles, birthday candles, dowels, craft sticks, fabric, burlap, mesh, lace, pipe cleaners, oasis, cork, pipe cleaners, golf tees, toothpicks, match sticks, beads, buttons, chopsticks, keys and locks, bolts and boards with holes, screws, balsa wood, pins, raw spaghetti, sieve, colander, plastic canvas, screening, perforated steel containers, napkin rings, latches, hooks, water beads, wiffle ball, artificial foliage and flowers, cubicle clips, martini umbrellas, martini swords, floral foam, fence</td>
<td>Feathers, reeds, cattails, stems, sticks in mud, sticks in snow, bark with woodpecker holes, clay, mud, moss, tree slices with drilled holes, cracked rocks, ice and tools, ice and salt, pine tree needles, moss patches, rotting stumps, wood chips, sharks teeth, shells with holes, pumpkin, gourds, perforated limestone, spider webs</td>
<td>Lattice, fencing, soil, sand, shovels, picks, hoes, augers, knotty pine boards, milk crates, post hole diggers, peg boards, loosely knit blankets, wine rack, windows, ladders, tunnel, parachute, finish lines, swinging doors, leaf strainer for gutters</td>
<td>Pieces of Styrofoam packaging, foam insulation, cardboard boxes, bits of grid wire, chicken wire, tomato cages, birdcages, carpet pieces, paper tubes, straws, bits of discarded shirts with buttons and buttonholes, bubble wrap, wire, twist tiles, rope, elastic, pegboard</td>
<td>Hammer, drill, screwdriver, rubber mallet, tent pegs, tweezers, pliers, hole punches, shape punches, brads, spades, hand drills, weeding tools, dibbers, skewers, nut crackers, stapler, cookie cutter, fork, garlic press, lemon juicer</td>
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<td>Having hands full of objects, full pockets, filling and dumping, dump trucks, bags, shopping carts, wheelbarrows</td>
<td>Transporting</td>
<td>Glass gems, beads, pompons, marbles, tiles, clothes pins, nuts and bolts, washers, cotton balls, ball bearings, magnets, nails, bags, baskets, tires, fanny pack, containers, backpack, bindle stick, plastic counters, tidytidwinks, popickle sticks, sponges, erasers, buttons, spoons, dice, chains, felt balls, cotton swabs, Styrofoam shapes, confetti, foam craft shapes, figurines, caps</td>
<td>Wood pieces, tree cookies, seeds, acorns, rocks, shells, leaves, pine cones, crab apples, beans, wood chips, drift wood, sand, flowers, dirt, gravel, fruits, rice, peach pits, cherry pits, deer corn, feathers, seed pods, sticks, hollowed coconut shells, sticks, branches, natural woven baskets</td>
<td>Wheelbarrow, yard cart, barrel, shopping cart, large shopping cart, sack, wagon, sled, stroller, laundry basket, trolleys, dollsies, carts, sled, stroller, ride-on toys, cardboard box</td>
<td>Plastic containers, buckets, cardboard boxes, Easter baskets, reusable grocery bags, milk jugs, milk crates, used purses, cloth sacks, corks, rubber bands, bread ties, caps, corks,</td>
<td>Scoops, tongs, funnel, shovel, spade, scoops, tool belt, clips, pulleys, clothesline, carabiners, hooks, skateboards, felt pads for furniture</td>
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## If your child loves:

### Ordering/Positioning

**Loose Parts**

- Dominos, birthday candles, magnets, buttons, popsicle sticks, pompons, spoons, beads, clothes pins, match sticks, checkers, poker chips, dice, chains, books, playing cards, washers, napkin rings, hex nuts, glass gems, tiddlywinks, paint stirrers, dowels, tiles, wooden cubes, graph paper, shoes, moudling corners, tile spacers

- Smooth rocks, slate, sticks, logs, tree slices, stumps, acorns, beans, seeds, pods, flat leaves, crab apples, pine cones, dry bones, shells, coconut halves, snowballs, ice cubes, kindling, branches for "planting" in rows

- Large hollow blocks, crates, cable spoons, palettes, bricks, cardboard boxes, furniture, ladders, barrels, branches, tires, logs, cords of wood, stepping stones, Twister

- Bread bag clips, cups, nesting cups, leftover kitchen/bath tiles, taped up cereal boxes (etc), empty bottles, sensory bottles, cardboard tubes, K-cups, solo cups, tissue boxes, paint swatches

- Mirrors, empty frames, tray with ledge, flat bottomed cake pans, shallow boxes, light box, yard stick, T-square, level, ruler

- Snap Circuits, Froebel gift sets, tangrams, Lego, Jenga, geometric shape builders, inset puzzles, wooden peg board toys, mosaic kits, bowling set, nesting dolls, Citiblocs, Katamino blocks, Kapla, KEVA, Rush Hour game, dinky cars, parking garage

### Natural Loose Parts

- Large play

- Makeovers, body paint, fashion dolls, mermaids, robots, shape shifters, werewolves, costumes, mixing media, room design, drawing on oneself

- Transformation

- Ordering/Positioning

- Dynamic Horizontal

- Orientation/Perspective

- Vehicles, strollers, lawn mowers, parades, sports, pushing objects and furniture around, scribbling left and right, making blocks into roads, balancing on curbs, waving flags, shakers

- Mirror tiles, cardboard tubes, foam blocks, boards, stools and chairs, ropes, washers, prisms, marbles, tiddlywinks, stained glass, small figurines, scale models, empty picture frames

- Hay bales, cornfields, reflective pools, sand, piles of leaves, large rocks, stump, logs, coconut halves, snow, sand

- Plastic culvert pipe, large concrete form, ladders, stools, rope hammock, tree house, cave, barrel, Twister game

- Telephone books for stacking/climbing, overturned buckets, pvc pipes, CD's, sunglasses, transparent bottles, old maps, coffee cans, dentist mirrors, sunglasses, colored lenses

- Mats for laying on, puppet theatre, magnifying glass, compass, loup, flashlights, shovels, hangers and hooks (for building downwards)

- Stilts, microscope, telescope, camera, binoculars, periscope, Brik-a-blok, Crazy Forts, pop-out tunnel, tent, jungle gym, kaleidoscope, sky projector, 3D puzzles, rocking horse

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About this chart: A schema is a repeated pattern of behavior a child employs in order to explore and learn about his or her environment. The lines between schemas (also called schemata), are not always clearly defined. A child may exhibit an interest in one dominant schema or many schemas at the same time. One schema may be connected with another. A dynamic horizontal schema may grow into an interest in trajectory or transporting, for example. Going through a barrier and enclosing often go hand-in-hand as well. Positioning may be a sub category of transforming, or vice versa. The chart is not intended to limit materials, but rather to illuminate an educated guess on which materials a particular child might be drawn to during open ended play.

The method in which the materials are presented may influence a child's interest. Deeper engagement can often be garnered by setting up a provocation to play which combines loose parts conducive to a child's schematic interest with other items related to a child's thematic interests.

**Example:** trajectory schema + interest in monkeys
boards + logs + toy monkey + tree = monkey catapults
= hours of experimentation

Internet Resources:
http://www.nature-play.co.uk/blog/schemas-in-childrens-play
https://m.dorsetforyou.com/schemas

Books:
*Loose Parts: Inspiring Play in Young Children*, Lisa Daly, Miriam Beloglovsky, Jenna Daly, 2014. Redleaf Press.
*Threads of Thinking: Schemas and Young Children's Learning*, Cathy Nutbrown, 2011. SAGE Publications Ltd.