

DIY LIKE A HUMMINGBIRD

10 steps

to naturally
well-designed
kids' spaces

INTRODUCTION

A few years ago, my family welcomed visitors to our front yard: a mother hummingbird and her oh-so-adorable babes. First, I spotted her tiny, camouflaged nest in a tree by the perimeter fence, behind our above-ground pool. Inside of it I discovered one jellybean-sized egg. It became my daily routine to check on the miniature abode — skillfully constructed to accommodate the changing needs of the growing hatchlings.

Obsessing over the nest, I was most taken by how mother hummingbird gives all of herself in the service of her children. Actually, I've been deliberating on the subject of parenting since even before my two daughters were born. Originally, I had thought: "If the worst comes to the worst and it turns out that I am just not cut out for it, as someone with adequate design education, at least I know how to build a nurturing environment." Looking in on the birds in my garden reminded me how I aspired, like mother hummingbird, to build a nest that kept my babies safe and fit perfectly during every stage of their development — expanding and stretching, as necessary.

Approaching something daunting from a familiar territory was a good strategy. I grew more comfortable with it step-by-step. First, unsatisfied with what was available at juvenile shops, I set out to design my own furniture line for kids. Then came the decision to establish an architectural practice focusing on developmental aspects of designing for children. To acquire and to hone a skill of intelligent communication without talking down, I established Children's Architecture Workshop. Later on, to keep up with evolving teenagers, I became a creativity coach.

Playing in the process, I have developed toys, products, and a child's-eye. Raising two kidlets, watching them mature and become independent has been extremely gratifying. The deeper I got into it, the more I realized that loving them unconditionally was enough, that kindness was the cornerstone, the most important building material — the spider silk that held good parenting together. I finally got it! As an empty-nester, I have a good perspective and can be of assistance.

When it comes to naturally well-designed kids' spaces, I can share the know-how acquired in the process. This how-toBOOK focuses on creating an ideal habitat in the service of nestlings. Stretching the metaphor is not just for fun — after all, Mother Nature is the most abundant source of inspiration and validation!

Now that my two daughters have flown away, instead of resting on laurels, I would like to share one possible way of going about intentionally harnessing, cultivating, and nourishing KINDNESS, because each day presents an opportunity to grow more skillful at propagating it.

Step 01: Establish Priorities — identifying essential needs

Step 02: Make a Commitment — fostering a sense of belonging

Step 03: Introduce a Framework — implementing objectives

Step 04: Build-in Flexibility — planning for the changes ahead

Step 05: Follow Through — scaling to the inhabitants

Step 06: Inspire and Encourage — feeding their soaring dreams

Step 07: See Problems as Opportunities — bolstering self-image

Step 08: Remain Focused — advancing continuity

Step 09: Prepare Them for Flight — stimulating growth

Step 10: Cultivate Independence — empowering by example



STEP .01 Establish Priorities

IDENTIFYING ESSENTIAL NEEDS

Just as mother hummingbird carefully selects the site for her nest by making sure that it not only suits her, but her young, you aim to create ideal conditions, the best environment for your child to thrive. It's all about giving roots and wings.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

+ Humans can aspire to create a safe and loving home

Hummers select nest sites that afford protection from predators

+ Humans can aspire to maintain a stable environment

Hummers select nest sites adjacent to territories defended by males

+ Humans can aspire to provide for every need

Hummers select nest sites in close proximity to bodies of water

+ Humans can aspire to hedge from adverse conditions

Hummers select nest sites that shield from the elements

+ Humans can aspire to give age-appropriate stimulation

Hummers select nest sites in close proximity to rich sources of nectar

to
protect
and serve



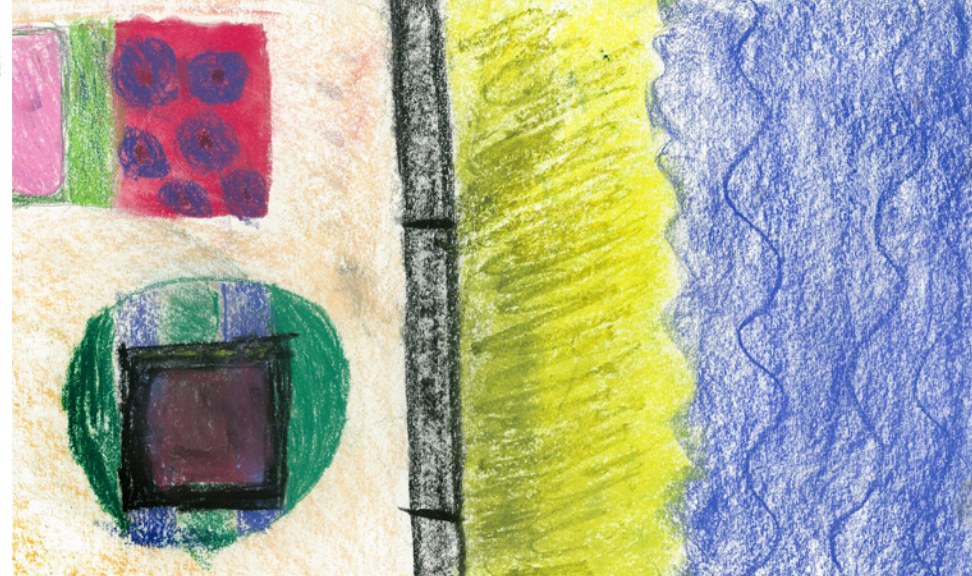
"It's definitely best for little children to have a regular life, especially if they can regulate it themselves."

— Astrid Lindgren, *Pippi Goes on Board*

According to *Starting Points* report released by Carnegie Corporation of New York in 1994, newborns usually have a well-organized capacity for adapting to environment. It states: *"But the unfolding of the developing brain is not inevitable. It depends on a fostering environment that is reasonably stable while at the same time stimulating, responsive, protective and loving."*

Apparently, soothing and stimulating are not mutually exclusive. Well. As a brand-new mother and an architect specializing in design for children, I need to gain first-hand knowledge of what's required in their ideal habitat. To identify a set of priorities, I organize a drawing contest/exhibition "Create an Imaginary World of Your Own." It's a great way to collect data and insight!

Upon receiving over a hundred designs by kids ages four to eleven, I analyze their fanciful drawings and realize that they are strikingly similar. The inventors of a bedroom as a lofty slumber zone in the clouds, an underwater submarine-like quarters shared with manatees, or an enclave set right on the beach are fantasizing about a room that evokes comfort, security and excitement all at once.



Kids seek the real world but reduced to a manageable size, the world they personally can transform to suit their whims — a secure, safe place to try out talents for structuring life. According to them, here are the requirements:

- 1 **instant access to a caregiver** —
a place where they can feel safe
("intercom to mom")
- 2 **consistency of routines** —
a comfortable bed
- 3 **ample room for play and fun** —
("a secret hiding place," "a trap door for snacks," "a water slide")
- 4 **autonomy** —
("a button to a secret entrance," "Clubhouse for Members Only")
- 5 **connection with the outside world, especially nature** —
a place where they can dream of adventure
("a chair that takes me to another country," "a tunnel to China")
- 6 **ability to exercise control** —
a place for all of their favorite possessions
- 7 **opportunity to care for something** —
a place for pets, both real and imaginary



The **rufous** hummingbird, who breeds in Alaska, builds in conifers, choosing sites low to the ground for the first nests of the season. By summer, if she nests the second time, she selects higher sites in broader leaves.

Tropical hummingbirds, on the other hand, are not concerned with temperature regulation; they can even nest indoors in the midst of human activity! Instead, they need to find a way to protect from water.

The **streamertail**, who builds on the rainy side of Jamaica, constructs her nest to drain moisture through it.

The **hermit**, who times her breeding to coincide with the floral display of the rainy season, locates her nest under a wide palm frond, using it like an umbrella.

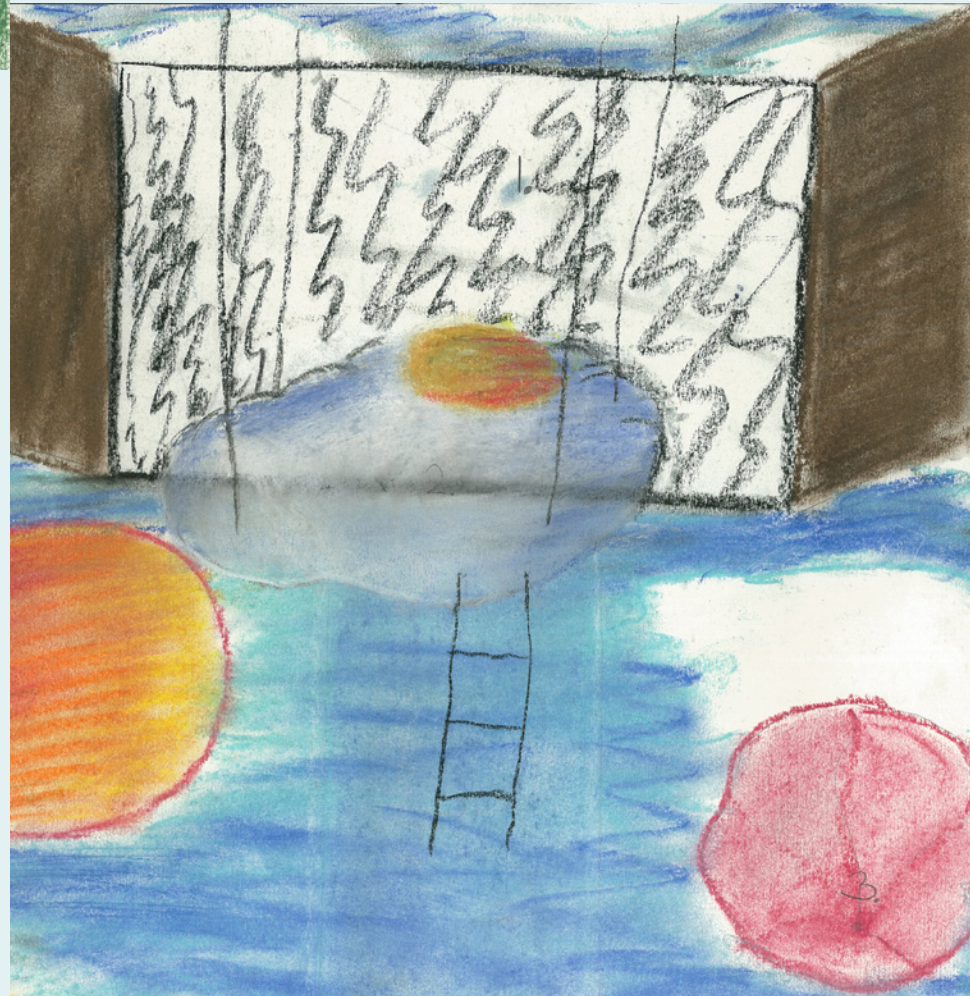
HUMMERS: SELECTING NEST SITES

Selecting the best site for her nest marks the onset of the breeding season. While scouting, the female hummingbird looks for a location that will shield from the elements, shelter from predators, and provide abundant food supply for her dependent offspring to grow and mature. To minimize the effects of the environment on the nest, she has a particular set of requirements that change depending on the season. Considerable variations in timing of nest-building and its architecture are also attributed to varying local conditions. In high altitudes, for example, additional overhanging protection is a certain prerequisite.

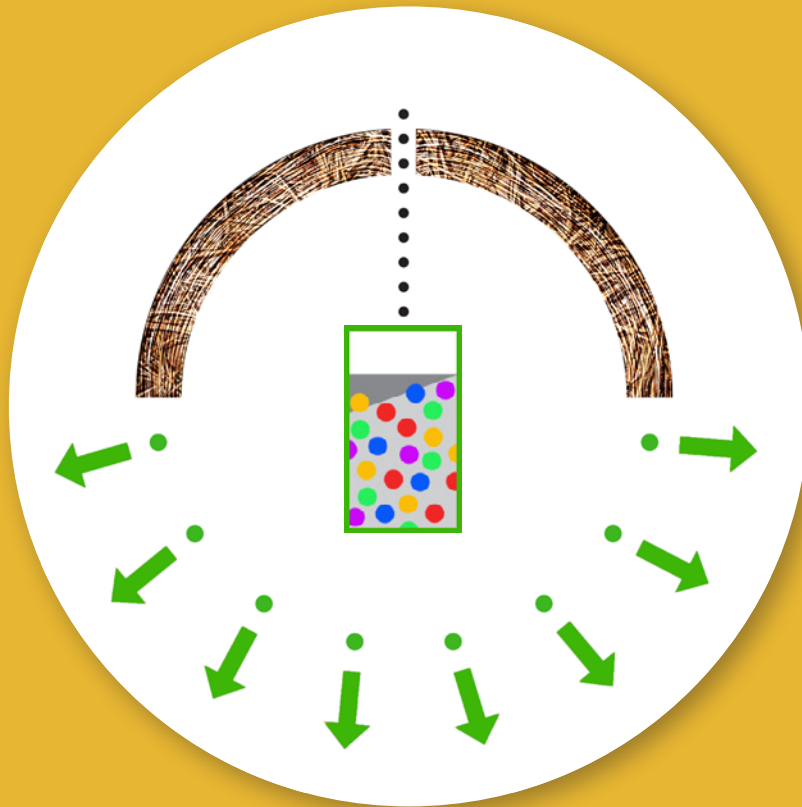
The **Allen's** hummingbird's territories are often located in small isolated openings in wooded areas that are shielded from one another by taller vegetation. She builds in low tangles of wild gooseberries where the temperatures are more constant in the winter, and a source of food is guaranteed.

The **broad-tailed** hummingbird usually builds right under an overhanging branch of pine, spruce or fir tree to keep heat from radiating into cold night air and to deflect from rain/snow flurries.

The **calliope** hummingbird orients her nest facing east to be warmed by the morning sun after cold mountain nights. She locates it in the woods that are adjacent to meadows where males are defending territories.



FROM CRADLE TO COLLEGE, CHILDREN NEED TO FEEL ENCOURAGED
AND BOLSTERED IN THE HARD WORK OF GROWING UP. THEIR ENVIRONMENT,
BOTH SUPPORTIVE AND ENGAGING, CAN PLAY A MAJOR ROLE



IDEAL ROOM DIAGRAM



+ **Babies** are not able to see subtle colors and details; their hearing, sense of touch and smell are almost fully developed at birth

SUPPORTIVE

- Safe and comfortable place to sleep
- Safe place to have diapers changed
- Cozy spot for feeding, cuddling, rocking
- Mother is the best first plaything

ENGAGING

- Mother is the best first plaything
- Capacity to perceive patterns, textures, and forms: opportunities to watch, reach for, and listen to
- Capacity to recognize sounds: opportunities for audiovisual experiences
- Capacity to investigate: opportunities for unlimited albeit safe exploration

+ **Toddlers** are sensory creatures; they are paying attention to everything and require active engagement with the environment for optimal development

SUPPORTIVE

- Cleanliness and safety
- Resilient/slip-proof surfaces
- Soft landing spots
- No sharp corners

ENGAGING

- A blur between real and imaginary: opportunities to go after/crawl into things
- Desire to understand: opportunities to invent solutions mentally
- Desire to test limits: opportunities for unlimited walking, running, and climbing
- Desire to control: opportunities to have a sense of power; everything is subject to a taste test

+ **Preschoolers** are imitating grown-up activities and thinking logically; they learn by role-playing

SUPPORTIVE

- Need to play close to the caregivers: favorable conditions to feeling included
- Might find night-time frightening: need for a bed with good quality mattress, treasured security blanket, and favorite stuffed animal

ENGAGING

- Can separate mentally from physical surroundings: opportunities to learn bodily control
- Sharp interest in the here and now: opportunities for physical play with maximum use of energy
- Discovery of spatial relations/directionality: access to child-size play furniture

+ **Grade-schoolers** are able to articulate their opinions; they enjoy competitive play and game activities

SUPPORTIVE

- Need for conscious organization of the environment: access to a desk, work chair, and task lighting
- Exploration of physical and social relationships: opportunities for sleepovers
- Deep levels of fantasy: opportunities for imaginative play

ENGAGING

- Sharpening of sensitivity, art appreciation, and awareness of design: access to art supplies; opportunities to start and maintain collections
- Exploration of sound: access to music instruments

+ **Preteens** are budding spatial thinkers; they start to enjoy some degree of risk

SUPPORTIVE

- Need for ease of organization: access to bookcases and plenty of storage options
- Need for quiet alone time: access to a cozy armchair, floor pillows, and rug for lounging

ENGAGING

- Need for self-expression: opportunities to reflect individual personality
- Need to have definite preferences: opportunities to choose hobbies, electronics, and clothes
- Need to show off accomplishments: opportunities for a prominent display
- Need to have interest in natural world: access to a view and the outdoors

+ **Teens** are challenging adults with their own ideas; they still love to play

SUPPORTIVE

- Need for an environment that allows to build a future from a safe place right at home
- Need for an environment that allows to compartmentalize, personalize, and customize
- Need for an environment that allows to form and maintain a positive self-image

ENGAGING

- Need for an environment that allows to be daring and experimental
- Need for an environment that allows to promote interest in continuous learning





to
comfort

STEP .02 Make a Commitment

FOSTERING A SENSE OF BELONGING

Once the appropriate site is chosen, building the nest is the next challenge. Mother hummingbird knows precisely how to go about achieving her well-defined goal. She takes the time to do what's best for her offspring exceptionally well. She is determined; she gives it all and so can you.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + **Humans can aspire to be involved, immersed,
and engaged wholeheartedly**

Hummers focus attention

- + **Humans can aspire to make an extraordinary effort**

Hummers set precise objectives
and follow through organically

- + **Humans can aspire to focus on the needs
of the child**

Hummers make appropriate choices with nestlings in mind

- + **Humans can aspire to forget themselves by giving
of themselves enthusiastically**

Hummers endure sacrifice



"Competent parents provide their children with a home atmosphere of "relaxed concern."
— Frank and Theresa Caplan, *The Power of Play*

KIDS' IDEAS MATERIALIZED

The outcome of "Create an Imaginary World of Your Own" contest/exhibition is a revelation. Clearly, kids themselves are the experts to consult with. Thus, I begin to involve children in the design process. Inviting their input builds self-esteem and fosters self-image — they feel valued as their needs are taken into consideration.

For instance, a 7-year-old's crayon drawing of the "underwater bedroom" (below) inspires a design for which an aquarium-like glass-block window wall and a custom work surface made of light-weight concrete are specified (on the right). The desk with embedded seashells features a cast-in-place sink and doubles as a lab bench that sustains and encourages messy hobbies and experiments while providing opportunities for open-ended play.

The background is designed to be neutral — quiet, not stressful, subtle — to accept a changing array of colorful objects, such as toys and artwork. A microscope, binoculars, magnifying glass, flower press, and weather instruments are kept in order and in step with a budding personality.



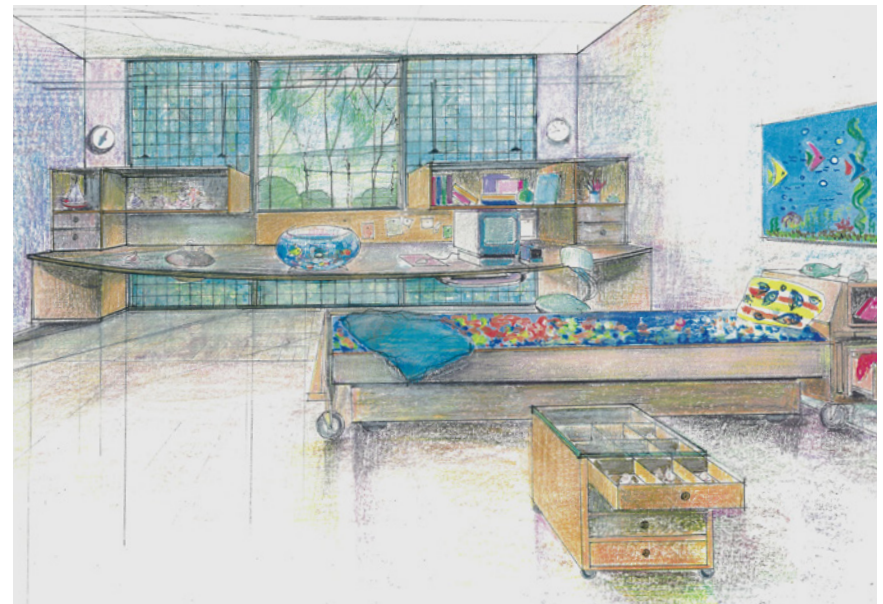
HUMMERS: DEVOTING TIME

The female hovers over the nest site as she carefully applies spider silk and plant materials to form a sticky base on which to build the nest rim. When completed, it has to have a lined interior and a camouflaged exterior. Its dimensions vary depending on proportions of the mother and her offspring.

*A nest of the **bee** hummer is the world's smallest — an inch in diameter by half an inch deep. The interior cup is the size of a nickel.*

To afford adequate protection to the eggs and young birds, mother hummingbird usually toils on the nest for about four (4) hours per day, making approximately thirty-four (34) trips for building supplies per hour. It takes from five days to as long as two weeks to complete. All the while, there are little eggs growing inside her.

*Occasionally, a nest is reused. In many cases, a new nest is built right on top of an old one. Ornithologist Herbert Brandt dissected the **blue-throat** nest to find out that it had been used for ten years and was more than twice the height of an average nest. Brandt estimated it contained nearly fifteen thousand miles of spider webbing!*





The bed is the sacred refuge at the center of it all. It has to be a calm place to rest and accommodate bed-time rituals. Research has shown that a 30-minute time period just before bed is when children are most receptive — it's when they listen and absorb more than any other time. Falling asleep in comfort and waking up to beauty and tranquility promotes a sense of well-being.

Clearly, the focal point of this particular drawing by a 10-year-old is an elaborate bed (above). Everything about it is carefully delineated: the rug it is on, its headboard, comforter and pillows. Interestingly, in the space depicted, the ceiling is replaced by the sky! The design parameters identified through the drawing call for a solution that offers a way to bring the outside in and to prominently feature a bed as a means for self-expression.

The rendering to interpret said requirements (top right) is all about lavishing attention on the tiniest details. The built-in bay window bed comforts and engages. Blurring the boundaries, it serves as a link between interior and exterior. It is a place not only to dream at night but to daydream with a book or a drawing pad.



“The kind life – the life lived in instinctive sympathetic identification with the vulnerabilities and attractions of others – is the life we are more inclined to live, and indeed is the one we are often living without letting ourselves know that this is what we are doing. People are leading secretly kind lives all the time but without a language in which to express this, or cultural support for it.”

– Adam Phillips and Barbara Taylor *On Kindness*

Introduce a Framework

IMPLEMENTING OBJECTIVES

Mother hummingbird knows exactly what materials she needs to collect as she builds a soft, easy to clean, maintain and update nest perfect for her offspring. While creating a functional design, she is determined to capitalize on what's available, and so can you.



to
delight,
inform and
satisfy

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + Humans can aspire to set up for maximum efficiency, spontaneity, and convertibility
Hummers adapt and "go with the flow"
- + Humans can aspire to achieve results by approaching mundane tasks creatively
Hummers take advantage of available resources
- + Humans can aspire to evolve and gain expertise
Hummers employ time-tested materials
- + Humans can aspire to promote a sense of well-being
Hummers know what is required of them to create the nest
- + Humans can aspire to put pleasure into every day
Hummers teach their offspring to appreciate what they have



"I fancy that most of those who think at all have done a great deal of their thinking in the first fourteen years."

— C.S. Lewis, *Surprised by Joy: The Shape of My Early Life*



KIDPLAY LINE

In 1991, as a pregnant architect setting up my own child's nursery unable to find much in terms of furnishings that respect the intelligence and sophistication human beings possess from day one, I endeavor to fill the gap and invent a line of children's furniture that would be suitable for my own tots.



The objective is to create tactile visually appealing pieces that get better with use and have lots of storage. Practicality — durability and ability to change with a growing child — is a major requirement. In addition, instead of overwhelming with cute details, the line has to encourage freedom of imagination through its removable, interchangeable, and toy-like components.

The result is a collection of modern forms made of tough, easy to maintain Finnish birch plywood in natural, red, yellow, and green.



Kidplay Sleep & Store Bed exudes versatility; its semi-circular panels work upright and laterally as headboard, guard rail, back support, removable foot board shelf, and bedside table. Storage bins on casters roll under the bed. Intended to grow with the child, the bed can initially have guardrails that later will fit side by side as back supports of a daybed.

HUMMERS: AMASSING LIGHT-WEIGHT BUILDING BLOCKS

The hummingbird's nest-building materials of choice include moss, grass, buds, rootlets, cotton from seeds, down from woolly leaves, and animal hair. She carries the items in her beak and on her body. She brings them to her nest bit by bit and laces them all together with spider webs.

*Most of the time, she employs quick-drying saliva to anchor the nest. However, the **Andean hillstar** uses nectar to glue its nest to a rock overhang or a ceiling of a cave.*

*Higher altitude species make a bulkier nest to provide better insulation. The **calliope** hummingbird augments traditional building materials with rugged bark shreds, pine needles, and insect cocoons.*

*The **Costa's** hummingbird, building in desert areas, adds dried leaves from weeds to the mix.*

*The **rufous** hummingbird operates with caterpillar silk.*

*The **broad-billed** hummingbird, building over streams, takes advantage of washed up grass stalks.*

*The **black-chinned** loves to mix in tree flowers gathered from willows or from the undersides of sycamore leaves. She does not coat the outside of the nest with lichens. This results in a beige-colored nest due to the main material of plant down showing through.*

*The **ruby-throated** hummingbird has a tendency to embellish the nest throughout the entire incubation period — she continues adding to it up until the eggs hatch.*

“In one sense kindness is always hazardous because it is based on a susceptibility to others, a capacity to identify with their pleasures and sufferings.”

— Adam Phillips and Barbara Taylor *On Kindness*



Kidplay Show & Store Bookcase features an interchangeable configuration of sliding boxes or drawers. They are small enough for a child to manipulate and use as play objects. Another good use for them is organizing toys according to interests. It makes keeping track of things and cleaning up a lot of fun. It also gives a sense of being in control!



Kidplay Table and Drum Seats sport toddler-friendly height and rounded edges; the set is perfect for building projects and three-dimensional crafts. The drum seats function as easily accessible toy storage. They are also very useful for collecting raw construction materials like cardboard tubes or natural objects picked up on walks.



Kidplay Easel + Art Cart fosters an experimental attitude toward art-making and keeps everything in order. It features height adjustable work surfaces for artists of all ages and has a place to store artwork as well as supplies. It is ready and well-stocked to explore different ideas and let imagination blossom by adding layers of make-believe onto daily reality.



STEP .04 Build-in Flexibility

PLANNING FOR THE CHANGES AHEAD

The hummingbird's nest demonstrates rugged construction techniques; it shows off her skills as a capable engineer. She builds a solid foundation anticipating the needs of her offspring. With this inspiration in mind, you can strive to provide the infrastructure bolstering your child during fragile or vulnerable stages of development.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + **Humans can aspire to stability, balance, and cohesion**

Hummers rely on existing infrastructure

- + **Humans can aspire to anticipate growth**

Hummers factor in structural integrity and durability

- + **Humans can aspire to implement a rational and far-sighted approach**

Hummers control the effect of climate conditions by choosing different nest sites in different seasons

- + **Humans can aspire to sweat the small stuff and pay attention to details**

Hummers demonstrate skill and artistry

to
love



"The popular idea that a child forgets easily is not an accurate one. Many people go right through life in the grip of an idea which has been impressed on them in very tender years."

— Agatha Christie

JONATHAN'S ROOM

Giving the child furniture that is not overly decorated is like offering him a blank sheet of paper on which he can create. In my opinion, it is much better than blocking his creative powers with coloring books full of spatial restrictions. Besides, it's never too early to help children appreciate the subtlety of natural materials as well as simple geometric shapes and clean lines of good design.

As Jonathan is honing new skills, it is important to make things easy to grasp. It is necessary to set up the framework for his leaps in development, to encourage exploration. Naturally, all of the details should be approached from the kid's-eye perspective.

Jonathan is a hands-on artist that needs a lot of space to work on his creations. Giving him plenty of room to spread out is the basic premise behind the design of all of the components that make up the space.

The bed, however, is the focal point and sets the tone. Fashioned from maple-veneered furniture grade plywood, it includes a roll-out trundle for those inevitable nights when a parent might need to sleep nearby.



HUMMERS: STARTING WITH THE INFRASTRUCTURE

Incorporating gathered materials into the nest usually involves some degree of interweaving until individual items form a matrix. It requires skill in masonry, weaving, and statics. The female treads the material down with her feet after placing it on the branch. To mold the outside, mother hummingbird perches on the edge, leans over, and makes adjustments with her bill. She adds final details while hovering over.

*The most basic nest is a simple cup saddled on top of a branch or across a fork, but a few species, including the **sylph** make a domed nest.*

*The **straight-billed hermit** uses a tip of a rain forest leaf as a foundation for her pendulous nest.*

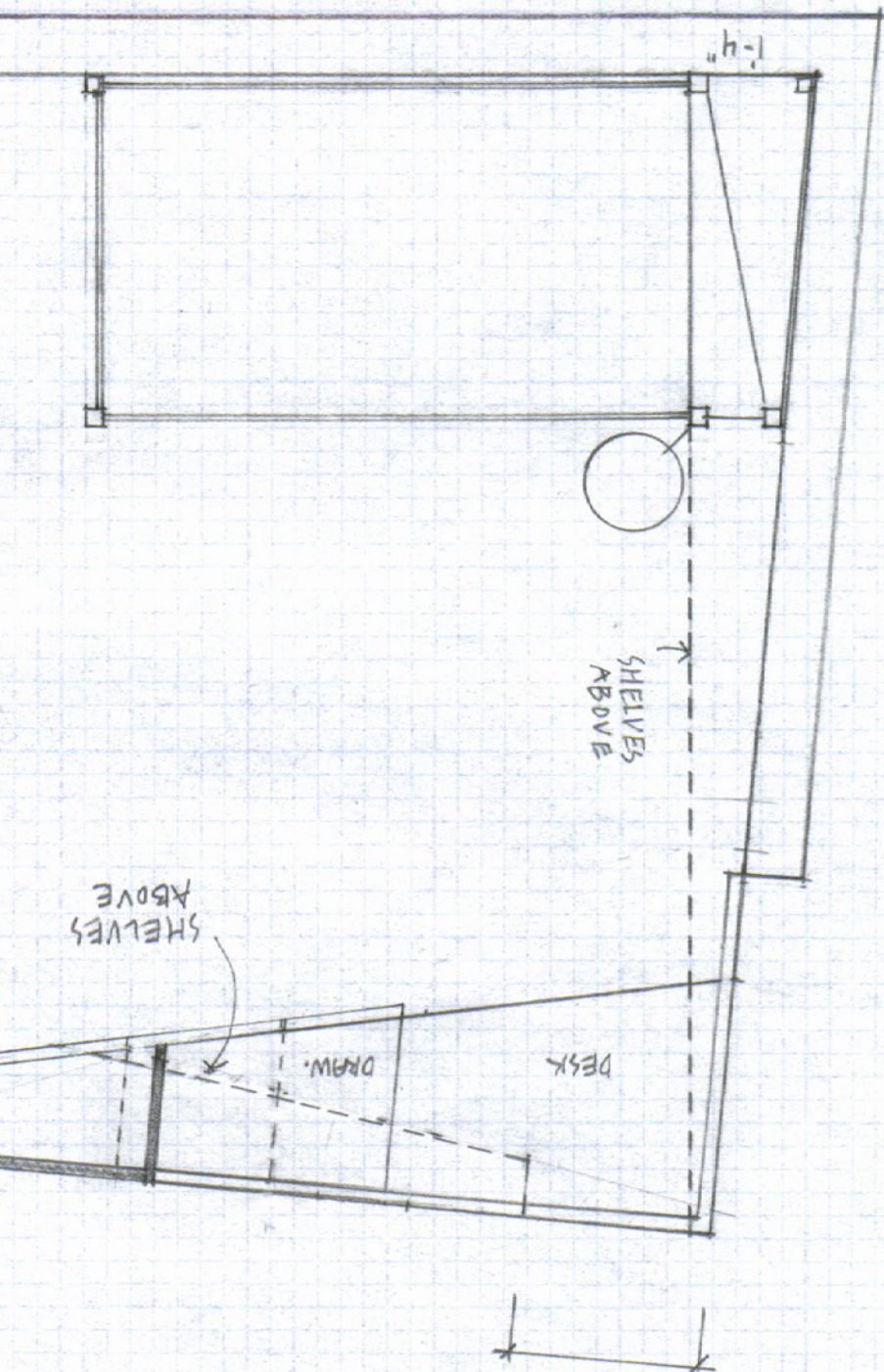
*The **Chimborazo hillstar**, which lives just below the snow line on the volcano Cotopaxi in Ecuador, uses a shallow cave or a side of a ravine as a place to start.*

While building her nest, the female hummingbird tries to disguise it as much as possible by using small sticks, seeds, and plant pieces, bits of lichen, moss and bark. She makes sure the lighter parts of the nest are in the sun, while the darker parts of the nest are in the shade. The is very hard to spot because it is so small and so well camouflaged. Both animals and people can easily stare right at it and think that it's just a knot on a tree limb.

*The **calliope** hummingbird hides her nest in groups of pine cones.*

“Putting oneself in someone else's shoes, as the saying goes, can be very uncomfortable. But if the pleasures of kindness – like all the greatest human pleasures – are inherently perilous, they are nonetheless some of the most satisfying we possess.”

— Adam Phillips and Barbara Taylor *On Kindness*



Jonathan, who has just transitioned from a crib to a twin size bed, needs a guardrail for safety. Why not give him a geometric art piece, triangular in shape, accented with a circle-as-handle at the top? It can be slid down the bed frame rail as the need for it subsides. Eventually, when it's not required at all, it will be positioned at the end of the bed as a foot board.

The triangular shape is echoed in the off-center double-height multi-functional headboard with shelving and a secret compartment running the entire width of the bed — a place to store Jonathan's large drawing portfolio.

Most amusing is the drum-like side table with a drawer that can be accessed from both front and back — a rolling satellite attached to the bed with a whimsical bracket allowing it to swing effortlessly in or away.





STEP .05 Follow Through

SCALING TO THE INHABITANTS

Energetic mother hummingbird sets up ideal conditions for her offspring to hatch — she uses her entire body to compact and mold the nest until she is satisfied with its shape. Like her, you can decide on the criteria and work passionately to achieve the desired results in the service of the child.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + Humans can aspire to reduce the big world to a manageable size for the child to comprehend

Hummers scale the nest to fit just right

- + Humans can aspire to do their best in building and upholding family rituals

Hummers custom-tailor routines

- + Humans can aspire to love unconditionally

Hummers do not hold anything back
and are completely involved

- + Humans can aspire to create a conducive, well-planned, and stimulating environment

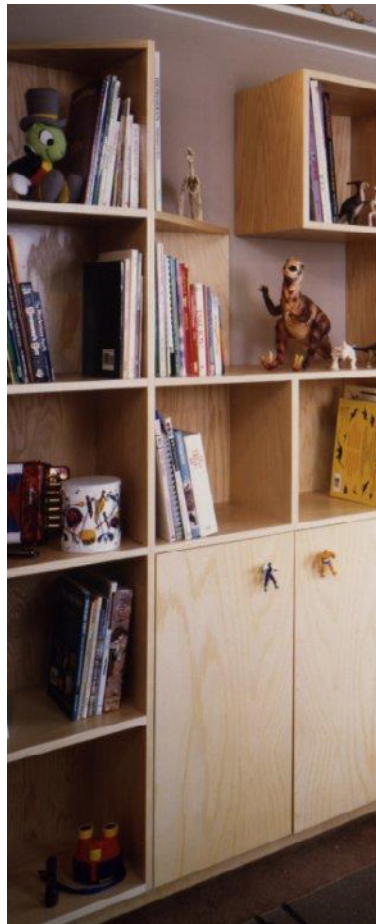
Hummers make the best use of space and imbue it
with playful details

to
structure
play



"[...]what time can be more beautiful than the one in which the finest virtues, innocent cheerfulness and indefinable longing for love constitute the sole motives of your life?"

— Leo Tolstoy, *Childhood, Boyhood, Youth*



ADAM'S ROOM

In their book *"The Power of Play"* Frank and Theresa Caplan write: *"Each child's unique pattern for personality development is affected by the physical qualifications of his birth, his singular temperament, the kind of mothering (and fathering) he receives during his earliest years, and the flexibility of the world of things which he can manipulate and satisfy his ego."*

They also state: *"A child's environment should offer opportunities to challenge his increasing physical powers; if it is barren of things that excite intellectual curiosity and academic learning, he is liable to give up trying."*

In Adam's room, bed, storage, and desk units wrap around to frame/maximize play space.

Fuss-free built-in furniture not only provides a place for everything — it sparks imagination and offers a wealth of choices. It cheerfully accommodates books, toys, games, crafts, art supplies, building sets, and music instruments. Its open-ended design allows for continuous rotating and updating as required to stimulate the child's budding interests. It's all on display — nothing is buried in the depths.

HUMMERS: SCULPTING THE INTERIOR

The nest is hemispherical inside, with a depression deep enough to house two eggs. Mother hummingbird carries spider webs to the construction site in her beak, under her chin, and across her breast. She uses both her chin and body to press them into the nest so that every piece goes exactly where she wants it.

She is very meticulous and is only satisfied when the inside of the nest follows her own contours precisely. Molding the interior calls for a time-tested procedure — she twirls about pressing her rump into the center of the nest and against the walls.

She has a system of using her feet to achieve the desired shape. With one foot hanging onto the nest and the other stomping the nest, she compacts the material and creates functional art.

Each nest is individually tailored to the mother's shape in order to keep all of the heat inside as she incubates. She works relentlessly lining the nest with downy using her long bill and tongue. The stuffing makes it soft and cozy, ready for arrival of her two tiny hatchlings.

“Its original meaning of kinship or sameness has stretched over time to encompass sentiments that today go by a wide variety of names – sympathy, generosity, altruism, benevolence, humanity, compassion, pity, empathy... The precise meanings of these words vary, but fundamentally they all denote what the Victorians called “open-heartedness,” the sympathetic expansiveness linking self to other.”

— Adam Phillips and Barbara Taylor *On Kindness*



A spacious corner desk is a designated place to study. Having one builds and reinforces good habits. It is adjustable and can be raised incrementally to accommodate the growing child. The spacious shelf unit nearby conveniently holds books and educational toys.



For amusement, superhero play figures are transformed into drawer and cabinet pulls.



Making use of an often wasted space, the electric train runs around the room's perimeter and adds to the fun.

This hardworking full-height armoire unit has a cork board panel. It offers a place to keep party invitations and schedules in sight. It is also a lively display of joyously treasured mementos.

The cozy trundle bed (below) is always ready for an over-night guest. If not, there is a quiet pleasure of a book waiting, inviting to lull Adam with flowing words and turning pages. He feels safe and snug here, surrounded by his favorite things.



Inspire and Encourage

FEEDING THEIR SOARING DREAMS

Not only does mother hummingbird make her nest extremely strong, she creates an environment that facilitates growth. She makes her nestlings feel cared for. She is there for them, paying attention and keeping up with their rapid development. The hummingbird's remarkable kindness and ability to provide exactly what's needed at every stage can be emulated.



to
Supply
tools for
maturation

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

+ Humans can aspire to have a thorough understanding of what's required

Hummers facilitate exploration without the overwhelm

+ Humans can aspire to be compassionate and generous

Hummers are present to devote time, show affection, and pay attention

+ Humans can aspire to make room for enriching play/learning experiences

Hummers build the nest to stretch and flatten as needed

+ Humans can aspire to embrace a sense of attachment, closeness, and affection

Hummers anticipate natural expansion



"Play is the highest form of research."

— Albert Einstein



KITCHEN OF THE MIND

"Kitchen of the Mind" is a designated area where the family comes together to do projects, listen to music, and read together. It is designed to provide all the accouterments the child needs for his fantasy to go to work. Infused with the industrial edge and tough personality, it's the library + media storage + studio.

Here things are demarcated and grouped. Open shelving characterized by visual cues and easy access is balanced with the clean look of closed storage to give the room a sense of a well-oiled "machine for living in." Things are kept where they are used, which makes it efficient. Everything is ready and waiting for action.

HUMMERS: BEING FLEXIBLE

The female hummingbird knows that by the time the nestlings are almost full-grown, the nest will be too small for them. In its due course, it will become stretched and somewhat flattened.

At first, it's a velvety, compact cup with a spongy floor, molded to her own curves perfect for her two tiny eggs during incubation period. Then, pearly eggs shatter and babies appear. Nourished by the mother, the birds grow rapidly, almost by the hour, and the nest must accommodate their changing size. That is not a problem!

That's already been taken into consideration and accounted for because mother hummingbird is well informed on the subject of structural elasticity as it pertains to the building materials she employs. She is in charge of creating a fluid environment, so vital in promoting expansion and growth.

As the nest is loosely woven from plant fibers and spider-web bindings, it is elastic enough to adjust with the babies as they mature. The spider silk used in the nest's construction helps give it malleability. Besides, the female parent frequently patches and repairs the nest for as long as it is being used.

The babies remain in the nest for about 21 days and it gets stretched almost twice its original size by the time the nestlings are ready to fly away. They leave once there is no room in the nest for two developing birds. They continue to grow after leaving the nest and mother hummingbird is still at their service.

“If we think of humans as essentially competitive, and therefore triumphalist by inclination, as we are encouraged to do, then kindness looks distinctly old-fashioned, indeed nostalgic, a vestige from a time when we could recognize ourselves in each other and feel sympathetic because of our kind-ness...”

—Adam Phillips and Barbara Taylor *On Kindness*

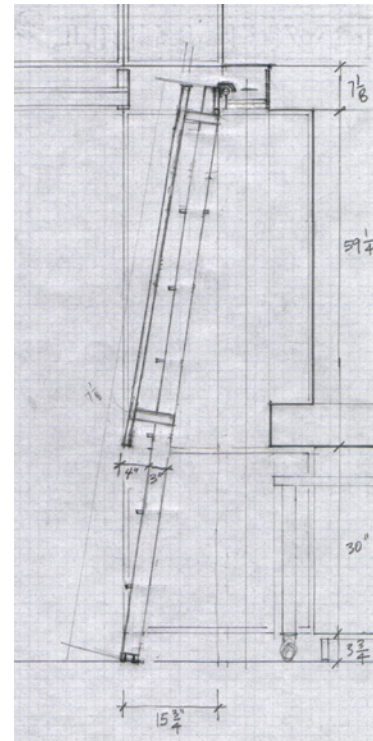


Its floor-to-ceiling open and glass-fronted maple-veneer cabinets, covering two walls like wallpaper, act as a backdrop. The sliding book/display case conceals a Murphy bed for grandparents to use when they visit. The custom-designed ladder glides on the same rail as the book/display case allowing access to otherwise out-of-reach long-term storage of large awkward items, such as the family's ski gear.

An expandable project table adds its own brand of fluidity to the mix; folded back, it can be pushed into its designated stash spot. Otherwise, it makes a larger surface available for spreading out big puzzles and boardgames.

The environment's welcoming vibe is enhanced with the use of natural allergen-free materials and fibers as well as pigment-free paints and water-based wood-finishing compounds.

Keeping track of stuff is a cinch in this room; thus, the clean-up is manageable for small hands. Designed to accommodate family time, this is the place where a sense of togetherness is fostered. Here, the kids are inspired to be creative, contemplative, expansive, and hands-on. It certainly makes rainy days speed by.





to provide fitting challenges

STEP .07

See Problems as Opportunities

BOLSTERING SELF-IMAGE

By specifically concentrating on designing the nest to address potential adversity, mother hummingbird does everything in her power to brood successfully. She is dedicated and committed to building an environment that gives her offspring a fighting chance. So can you.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + **Humans can aspire to show the child how to manage disappointment**
Hummers help the nestlings reach milestones and handle setbacks in stride
- + **Humans can aspire to create favorable conditions for the child's self-expression**
Hummers parent by example
- + **Humans can aspire to let the child revel in success by supplying age-appropriate toys and play materials**
Hummers relish the process and make growing up a fun game
- + **Humans can aspire to guide the child in opening their heart by being altruistic themselves**
Hummers give all of themselves



"The Foundations of your childhood, they stay with you."
— Cassandra Clare, *City of Heavenly Fire*



ZACHARY'S ROOM

Zachary's domain is a world where everything is brought down in scale to play with and manipulate as he desires, with ample opportunities to be free and daring. Like most rooms in the house, Zachary's bedroom features no 90-degree angles. Maximizing space available and embracing existing geometry of no right angles means thinking out of the box.

The parti/big idea is to create SAFE HAVEN by centering on needs both physical and psychological. Since a room dominated by one theme might be outgrown quickly, that is not the direction. Instead, it should feel like a free-spirited retreat evoking faraway places and instilling a sense of wonder.

Incorporating reading into the flow of activity is one of the objectives. Scattering good reading materials around and providing a reading light by the bed helps to achieve the desired result.

The bed is set on heavy-duty large metal and rubber industrial casters for buoyancy. Easy relocating ensures versatility. Its headboard features gliding drawers and bookcases on either side as well as pull-out shelves for a clock and a glass of water. A trundle to accommodate guests sleeping over is tucked away underneath.



HUMMERS: IMMERSING IN PARENTING

Hummingbirds have the largest known relative heart size of all birds. Their heart represents 2.4% of their body weight. On the other hand, of all birds, hummingbirds lay the smallest eggs.

The edge of the cup is curved inward to protect the eggs from tipping out in high winds. For a few days before egg-laying, the female may sit on the nest as if incubating. This behavior is called pseudo-incubation and is exhibited by other birds (male and female) as well, including bald eagles.

The incubation period takes 15 to 20 days, depending upon the species. The hummingbird spreads her feathers to make body contact with the eggs. She leaves briefly to refuel, not longer than 5 minutes, keeping the eggs covered 60 to 80% of the time.

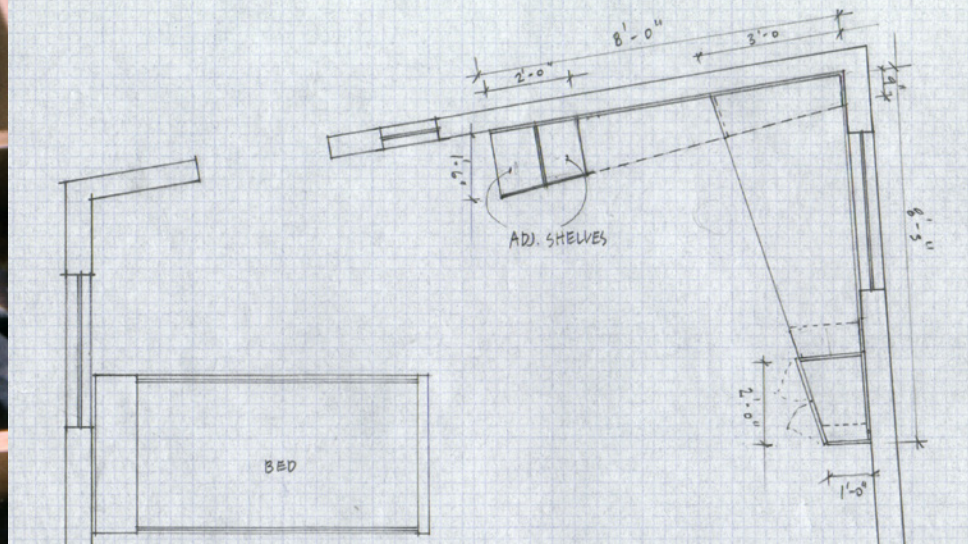
*The **ruby-throated** mother hummingbird defends territories around the nest and sometimes around food sources. She has been seen chasing titmice, chickadees, goldfinches, and even blue jays. She uses all of the same displays as the male except the dive display.*

*The **blue-throated** hummingbird has been known to raise 3 broods in one season occurring between April and July.*

*A case of the **broad-tailed** hummingbird having two nests at once was recorded. In one nest she had fledglings that she was feeding and in the other nest she was incubating a single egg.*

“The forms kindness can take ... are partly learned from the societies in which we grow up, and so can be unlearned or badly taught or resisted... Children begin their lives “naturally” kind, and then something happens to this kindness as they grow up in contemporary society.”

— Adam Phillips and Barbara Taylor *On Kindness*



The storage-homework area features a double-sided bookcase module that is designed for easy reach from both the desk and the bed. The desk adjusts in 1" increments to elevate as Zachary grows — from 25" to the maximum adult-sized 30" above finished floor.



Wrap-around bulletin board serves as a handy "backsplash" for ideas spilling everywhere. Playfully arranged cabinets are trapezoidal in shape to mimic the house's skewed geometry. There are cabinet pulls installed at a traditional height and at the very bottom to be opened right from the floor without much effort.



This free-standing, glass-topped collection cart features compartmentalized interchangeable (to show off current favorite at the top) drawers that preserve and display sea shells, rocks, coins, souvenirs, and other "treasures" gathered and kept for further examination by an inveterate traveler. It's the rolling cabinet of curiosities or a personal museum of natural history.



STEP .08 Remain Focused

ADVANCING CONTINUITY

Mother hummingbird comes close to death on cold nights to keep her offspring alive; she endangers herself to make sure that her babies survive. Her drive and self-sacrifice at the time when her children need her most are inspirational.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

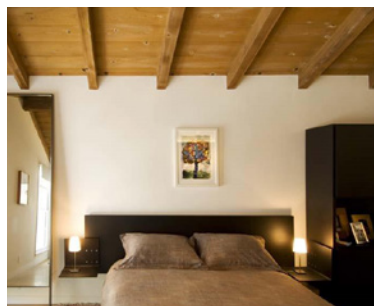
- + **Humans can aspire to be resolute, aiming to raise the child who can handle whatever is in store**
Hummers become the absolute primary influence in building character
- + **Humans can aspire to be diligent in helping the child develop resilience**
Hummers insulate from and expose to the natural environment
- + **Humans can aspire to be tolerant knowing that confidence in children depends on having a solid reason to believe they are competent**
Hummers have patience
- + **Humans can aspire to be responsive, creating equilibrium while teaching the child a wide range of positive coping strategies**
Hummers have a clearly defined purpose

to
nurture



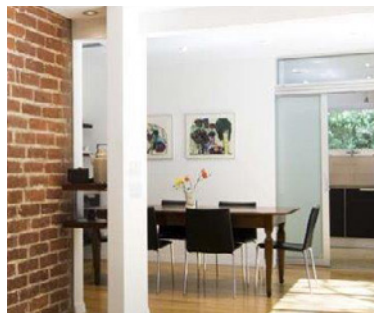
"Being present, whether with children, with friends, or even with oneself, is hard work. But isn't this attentiveness something we want more than praise?"

— Stephen Grosz, *The Examined Life: How We Lose and Find Ourselves*



SHOWCASING KIDS' ARTWORK

Young children use paints and crayons to communicate the experiences and preoccupations they are unable to express in words. It has become my life's overarching goal to provide tools for this very important work. Jean Piaget tells us: *"In order for a child to understand something he must construct it for himself, he must reinvent it."*



According to Buckminster Fuller, *"A great many children are perfectly willing and capable of artistic development, but their environment inhibits them."* Ever since my two daughters were born, I have been striving to build an ideal environment for advancement of their innate creativity and individuality.



In addition to being present, the objective has always been to make sure that whatever materials they might need are right there, at their fingertips. Well, the very first piece I designed for the nursery was an easel (its third version received The Best Toy of the Year Award).

As a staunch supporter, I've turned our home into a showcase of our daughters' artwork. It's been prominently featured in the master bedroom, dining room, living room, home office, hallway, laundry, and even in the garden!

HUMMERS: REGULATING THE TEMPERATURE

The nest structures are so well-insulated that a brooding female can keep the eggs at 95° to 97° F while the temperature outside drops into the 40's. She sits tight in cold, rainy periods and does not conserve energy by going into a state of torpor at night while incubating, as drops in temperature delay embryo development.

Since deaths of youngsters occur mostly during cold wet weather, females brood babies until they begin to attain feathers and regulate their own heat.

*The **calliope** hummingbird, who nests in the mountains where temperatures approach freezing, reserves the last feeding trip of the day for herself, stockpiling the energy needed to warm the babies through the night.*

Nests built in the winter/spring are deeper than the ones built during the summer months. The wind side of the nest is usually thicker than the lee-ward side. On colder days, the mother will wiggle down further into the nest to help keep the babies warm. However, on hot days, she stands by, letting a breeze blow through the thinner sides of the nest to keep the nestlings cool.

“Everybody is vulnerable at every stage of their lives; everybody is subject to illness, accident, personal tragedy, political and economic reality. This doesn't mean that people aren't also resilient and resourceful. Bearing other people's vulnerability – which means sharing in it imaginatively and practically without needing to get rid of it, to yank people out of it – entails being able to bear one's own.”

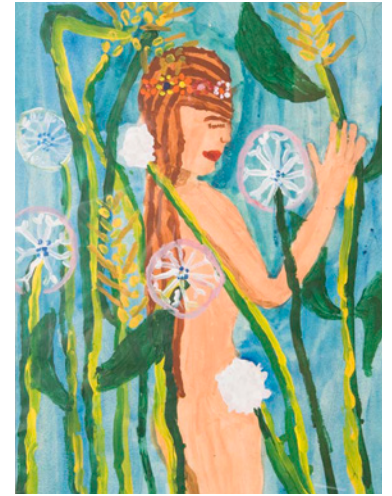
– Adam Phillips and Barbara Taylor *On Kindness*



It's much more fun to initiate opportune moments instead of waiting for them to happen.

When designing our garden, I envision lingering alfresco dinners amidst fragrant rose bushes, children playing Marco Polo, guests running out of the scorching sauna and jumping into the relaxing bubbling spa, strategically assembled to partake in the drama of the fire pit.

In terms of materials, it's all very stark and simple. The only decorative detail is the mosaic/water feature incorporated into the concrete wall of the above-ground swimming pool. It's a girl standing in the field of dandelions taken from the painting by one of our daughters.





STEP .09

Prepare Them for Flight

STIMULATING GROWTH

Determined mother hummingbird continues to show that her size is a non issue. She is immersed in her nestlings' development and teaches them by example. Just like her, you can be involved in the life of your child wholeheartedly.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + **Humans can aspire to acknowledge and praise the child's acts of kindness**
Hummers make appropriate choices
- + **Humans can aspire to value the child's effort over avoiding failure**
Hummers support relentlessly
- + **Humans can aspire to teach the child social skills**
Hummers have a wide range of conflict resolution strategies
- + **Humans can aspire to help learn patience: the child's needs are just as important as the needs of others**
Hummers reinforce the importance of sharing and including
- + **Humans can aspire to viscerally accept the way things are**
Hummers provide unflinching encouragement



"The ache for home lives in all of us.
The safe place where we can go as we are
and not be questioned."
— Maya Angelou, *All God's Children Need Traveling Shoes*



PLAY STRUCTURES

Within an environment full of new play challenges, curiosity and a spirit of adventure are fueled. And with each success, the child's self-confidence flourishes.

Parents Magazine asked me to draft plans for a simple indoor/outdoor playhouse that adults and kids could build together. I asked my friend Susan Purcell to give me a hand. We came up with this design using PVC plumbing pipes and bedsheets.

½" PVC piping is sturdy, inexpensive, and readily available. It comes in 10' lengths and can be cut with a hacksaw. Corresponding joints connect the varying lengths of pipe.

Like a set of giant Tinker Toys, the playhouse can be assembled in any number of ways. This particular configuration requires the following materials:

PIPE LENGTH	QTY	JOINTS	QTY
52"	2	Tee	44
18"	56	45 ell	8
12"	22	90 ell	10
4"	8	side outlet ell	4

HUMMERS: SUPPLYING FOOD FOR GROWTH

Baby hummingbirds emerge frail and helpless, blind and naked. They look like two raisins — their semi-transparent skin is wrinkled and their closed eyes take up most of their faces.

In about a week, the thin veil covering their eyes splits. At 10 days they can maintain their own body temperature, and mother hummingbird does not need to sit on the chicks any longer.

By 2 ½ weeks old, they are covered with feathers and can groom themselves. They test their wings by anchoring a toe in the nest and fluttering rapidly. But young hummingbirds will not leave the nest until their wings are developed enough to fly and they are nearly the size of adult birds.

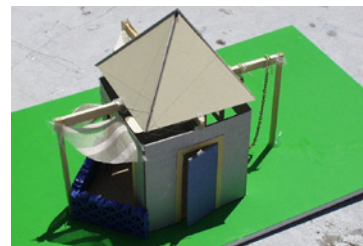
By the time they are about a week old, nestlings respond to the breeze of their mother's wing beats as she hovers near them!

A well-fed nestling can be identified by a large bulge in its throat. A diet of just sugar and water or nectar is not enough for a growing youngster. Over the course of the day, the mother changes what she feeds her young but is never absent for more than 5 minutes.

First thing in the morning, she brings them nectar — after the long night the young need instant energy to make sure they keep warm while the mother is collecting food. Later in the day, she begins to deliver more and more insects. By the afternoon, insects are the main food she carries to the nest. Giving the nestlings extra protein later in the day helps them get through cooler nights.

“It is not that real kindness requires people to be selfless, it is rather that real kindness changes people in the doing of it, often in unpredictable ways. Real kindness is an exchange with essentially unpredictable consequences.”

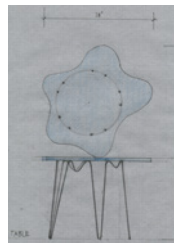
— Adam Phillips and Barbara Taylor *On Kindness*



Hired by *Child Magazine* to create a “backyard dream house,” I enlist my daughters as collaborators and expert consultants. The outcome is the play structure complete with stage, swing, sandbox, and built-in planters.



It's a perfect setting for a tearoom, a hospital ward, or whatever else the child might imagine at a given moment — the curtain is waiting to open on any drama. Built-in planters invite to start an herb garden, the sandbox is ready for digging in or building a castle, and the enticing swing is inviting or provoking to fearlessly fly through the air!



Designed in panels that can be assembled and dis-assembled relatively easily, it is customizable. Once the sandbox is outgrown, the pyramid roof can be lifted to create a look-out platform/observation deck on the second level. There is even the table/chair set to go with it.





STEP .10 Cultivate Independence

EMPOWERING BY EXAMPLE

Mother hummingbird knows how to open the door to the future. Helping her children grasp and comprehend where they fit in the larger scheme is the responsibility she takes very seriously — she lets them taste success in small increments, and so can you.

NATURE & NURTURE: WHAT WE CAN LEARN FROM THE HUMMINGBIRD'S INSTINCTUAL BEHAVIOR

- + **Humans can aspire to guide the child in getting involved with their world directly**
Hummers are intimately connected to their habitat
- + **Humans can aspire to supply the child with first-hand experiences**
Hummers pioneer and structure development
- + **Humans can aspire to have high expectations of the child**
Hummers instill values, basic sense of right and wrong
- + **Humans can aspire to use criticism of the child's actions as constructive targeted feedback**
Hummers establish benevolent practices and routines
- + **Humans can aspire to know when to let go**
Hummers get out of the way as the nestlings learn to fly by making many messy attempts

to
inSpire



"The happiest moments of my life have been the few which I have passed at home in the bosom of my family."
— Thomas Jefferson

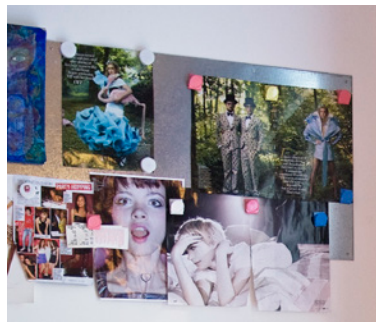


ROOM WITH A VIEW

Creating/assigning a space for everything, including sewing, keeps the floor uncluttered making it easy to clean and maintain. Editing down to what's needed while adding and subtracting personal touches as they are found and discovered is an on-going process. A magnetized strip of galvanized sheet metal above the sewing work station and within easy reach helps to streamline, manage, and keep track of assorted photos.



Once the portable desk is wheeled out to take the floor, the bedroom is turned into a private office. A psychological adjustment takes place; a mood is shifted from calm and relaxing to work-focused. It lasts for a while but when her concentration begins to slip, she can rest her eyes looking at the landscape just outside. A laptop makes cable management not an issue.



This bulletin/mood board, out of the same galvanized sheet metal (as the strip above), embellishes the wall and packs the room with personality while dealing with a succession of fads in the form of favorite magazine clippings, postcards, and keepsakes. Besides reflecting individuality, it is a handy tool while organizing thoughts for a current creative project. It helps to keep in touch with ongoing events and develop new interests.

HUMMERS: LETTING GO

The nestlings gradually outgrow the nest. They are ready to leave in 3 weeks, usually on a calm morning. They have good mid-air control, but have a hard time landing at first. Their wing and tail feathers are not fully-grown. They are slightly plumper than their mother at the time of departure.

After the fledglings have left the protection and warmth of the nest, they remain perched nearby for several days. They make begging calls to attract their mother's attention and are fed by her.

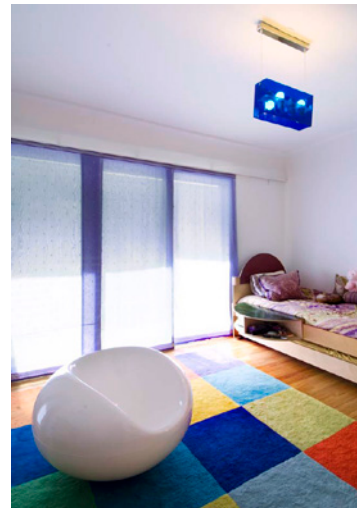
For a few days after this (up to 3 weeks), they follow her about, probably learning appropriate sources of nectar and insects to feed on. This is the time to master the art of hovering while sipping on nectar. The techniques of catching insects in flight have to be learned as well. They watch their mother and gain proficiency by trial and error.

Siblings chase each other acquiring skills they will later depend on to defend territories; they are mastering roles to take place in adult society: visiting a thousand flowers a day, diving at sixty miles an hour, flying backwards.

*Named **Joyas volardores**, flying jewels, iridescent hummingbirds can fly more than five hundred miles without pausing to rest: **bearded helmet-crests** and **booted racket-tails**, **violet-tailed sylphs** and **violet-capped woodnymphs**, **crimson topazes** and **purple-crowned fairies**, **red-tailed comets** and **pufflegs**, **rainbow-bearded thornbills** and **glittering-bellied emeralds**, **velvet-purple coronets** and **fiery-tailed awlbills**, **golden-bellied star-frontlets** and **Andean hillstars**, **spatuletails** and **amethyst woodstars**.*

“... the child needs the adult – and his wider society – to help him keep faith with his kindness, that is, to help him discover and enjoy the pleasures of caring for others...”

– Adam Phillips and Barbara Taylor *On Kindness*



To provide direct access to the outdoors from my daughter's room, I install a nine-foot-wide three-panel sliding door that opens up to a private patio below decomposed granite hill embellished by succulents. To set up a workspace looking out and capitalizing on the view is the next step.

In an effort to create an environment where benevolent work routines are naturally suggested and sitting at a desk is associated with a sense of being uplifted, I devise a slender, machine-like table on casters — lightweight, compact, and maneuverable — something that could be slipped into a corner while not in use and wheeled out when necessary. I utilize aluminum as the sole material.

Then, I send a picture of it to the MoMA buyer and receive an indication that my new ergonomic desk, dubbed as A-Desk, might be of interest. I schedule a meeting. And the next thing I do is design a collection of companion pieces. Might as well take full advantage of the opportunity!



CONCLUSION

As a mother, the most important advice I can give you is to tirelessly pollinate kindness. Do your best! Children copy their parents. That's how they learn. They watch you and emulate. Give them you they will not feel conflicted and confused about. Teach them well by example.

It's exhausting, but rewarding. To "DIY like a hummingbird," you just have to put your heart into it. As Brian Doyle says, "*A hummingbird's heart is a lot of the hummingbird.*"

I started this project without really knowing where it will end up, quite comfortable with the mindset of trusting that solutions will emerge as I apply myself to whatever it is I am pursuing. Yes, I put my heart into it and the rest took care of itself — it's only natural.

I set out to share with other parents that it does not have to be difficult to create kid-friendly environments. It turned out to be a thought-provoking adventure of revisiting my own kids' childhood. It gave me a lot of pleasure. Like the parenting process itself: as long as you have good intentions and put in the effort, you are embracing growth. You are making steps. It's incremental.

It's always work in progress and there is no way of knowing what the outcome will be. Thus, it's really important to enjoy doing it, to be grateful for the opportunity, even when it's a struggle. You reap the rewards not only when you are old and gray, but along the way. It gives your life meaning.

Why? Because applying yourself completely is exhilarating. Perhaps it can be compared to a feeling of flight. Wouldn't you think?



DIY

LIKE A HUMMINGBIRD

10 steps to naturally well-designed kids' spaces at a glance



.01
Define Priorities
identifying essential needs



.02
Make a Commitment
fostering a sense of belonging



.03
Establish a Framework
implementing objectives



.04
Build-in Flexibility
planning for the changes ahead



.05
Follow Through
scaling to the inhabitants



.06
Inspire and Encourage
feeding their soaring dreams



.07
See Problems as Opportunities
bolstering self-image



.08
Remain Focused
advancing continuity



.09
Prepare Them for Flight
stimulating growth



.10
Cultivate Independence
empowering by example

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