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**Designing interior space  
for children**Craig Birdsong, Mary E. Wyant  
and Donald J. Sherman<sup>1</sup>**Quick Facts**

A well-designed child's environment provides maximum development of cognitive, social, emotional and motor skills.

Fresh air, ample light and ventilation are basic requirements for healthy growth of children.

See that objects in a child's environment are safe.

Children need storage space to store their collections, hobbies, games and toys.

Major furniture selected for a child's room should be adaptable with time so it can be used as the child grows older. Other furniture for a child's room should be small scaled to permit easy use by the child.

Personal storage space and furnishings helps children define and create a sense of place.

A well-designed child's environment provides maximum development of cognitive, social, emotional, and physical and motor skills. The development of these skills can be enhanced through an environment that provides flexibility, adaptability and challenge.

Provide a full range of design elements to encourage children to experiment and design their own environment. Examples of ranges are noted in Table 1. For general design information, see Service in Action sheet 9.513, *Chart of design elements and principles*.

Tony Torrice, a partner in *Living and Learning Environments* and designer of some 270 children's rooms in the last decade, has an interesting approach that involves children in the design

process. He begins with six color cards: red, orange, yellow, blue, green and purple. The child is asked to pick one, or the designer says: "If you could have one of these, which would it be?" He does not say: "Pick your favorite," believing that once thought intervenes, the child is liable to turn to the parent for the right answer. Torrice does the pick-a-card trick several times, but not at the same session. Then comes hours of dreaming along with the child. He may say, "Picture the perfect room. What's it like?" Then, he continues to question the child about the specifics of his or her space: "Where will you sleep? What's your bed like? Is it high or low?"

The designer often will sit on the floor with the child and the two of them will draw the room, answering questions as they go. Torrice's message is: "In your room—your personal kingdom—you're in charge." According to Torrice's research and experience this approach is useful to help children establish and maintain a healthy sense of power and self-worth. For more information on Torrice's methods and findings read *In My Room: Designing for and with Children* (co-authored with Ro Logrippo, Fawcett Columbine publishers.<sup>2</sup>

**Table 1: Ranges of design elements.**

Elements	Needed ranges
Color/light	Warm to cool Light to dark Bright to dull
Texture	Smooth to rough
Line	Vertical to horizontal Straight to curvilinear
Form	Rectangular Angular Spherical
Space/time	Negative to positive Static to active

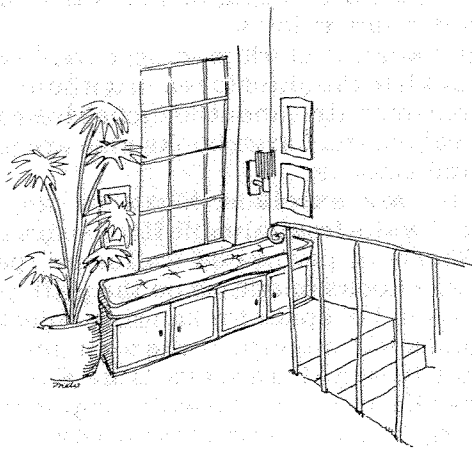
<sup>1</sup>Craig Birdsong, Colorado State University Cooperative Extension consumer specialist and associate professor; Mary E. Wyant, designer/artist; and Donald J. Sherman, professor; design, merchandising and consumer sciences (2/90)

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## Air and Light Requirements

Fresh air, ample light and constant ventilation are basic requirements for healthy growth. Interior spaces utilized for children should provide these. If windowpanes are cracked or window frames admit excessive drafts, they should be replaced or repaired with new glass, caulking and weather-stripping.

As well as admitting air and light, windows can provide a visual release for the young and allow them to learn about the affairs of the world beyond their own space (sometimes a necessity in today's smaller homes). Windows that are too far above the floor level for children to easily see out can have a platform installed below, large enough for a child to lie or sit upon. The space beneath the platform can be left open for storage of toys and equipment, enclosed with storage drawers, or constructed with semi-enclosures, creating a secret hideaway.



Window ledges or sills can provide space for small gardens and thereby create another opportunity to teach the inquisitive mind about the care and growth of plants.

Window treatments should be constructed of durable, easy-care materials that block out sunlight for naps. An opaque roll blind or inexpensive venetian blind behind an inexpensive, movable sheer allows more control of natural light at less expense than many other treatments. Though other treatments, such as draperies, curtains and shutters are available, most do not offer flexibility for light control and are more expensive.

Artificial lighting also is necessary as a supplement to natural light on dreary days and for nighttime activities. Very young children will not need specific (task) lighting since they do not perform highly complicated tasks. However, adequate general lighting is needed. This might consist of an overhead (ceiling) fixture and at least one portable lamp. The portable lamp can be used as a night light for the child and/or as a reading light for adults. Older children who read should be given one or two task lights in addition to general lighting. All lighting should be soft and shielded from the eye.

## Noise Control

Enclosed and/or limited spaces often increase noise levels made by children in their daily rou-

tine. Provisions for noise reduction should be planned for the sake of adults as well as children. Soft, roughly textured materials and objects absorb sounds and reduce noise levels.

Carpets and rugs help absorb the familiar and often annoying sounds of play. According to acoustical laboratory studies, cut-pile textured carpets over good pads are the most effective carpets for noise absorption and reduction; the higher the cut-pile, the more sound was absorbed. However, the type of fiber does not make a significant difference in the amount of noise absorbed.<sup>3</sup>

Even though carpeting reduces noise, a wall-to-wall carpet that will last and clean well often is too expensive or impractical to install in a child's room. An inexpensive area-carpet or a rug over vinyl or wood flooring will serve a child effectively, especially if the child has many toys or games that work best on hard floors.

Area rugs are easy to take up and clean, permit a more flexible use of the space, help define activity areas within the space, and provide an inexpensive way to add color and texture.

Cork is another excellent sound absorbing material that can be purchased as rolls or squares and attached to walls, ceilings and doors with adhesive. Large panels (4 feet by 8 feet) of celotex, painted (with paints that do not close up the openings and reduce the ability to absorb sound), left in the natural off-white state or covered with fabric (felt), also will absorb sound.

Panels of rigid insulative materials can be used in the same manner as celotex. These panels also can be used as tackboards or bulletin boards for displaying children's possessions.

Panels of heavy fabric can be shirred and stretched on rods, or fabric can be stretched taut over 1-inch by 2-inch frames for a solid effect. Either of these fabric uses creates a dead-air space between the child's room and adjoining rooms.

When possible, locate storage areas, such as closets or large bulky pieces of furniture, between adjacent activity areas or rooms. This is an excellent way to reduce sound transmission from one area to another.

## Safety

Though the underlying idea of a child's environment is to provide opportunity for the child to mold a personal space, adults must see that objects in the environment are safe.

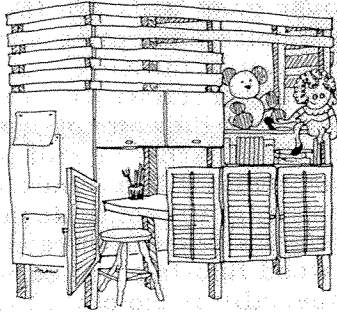
Avoid objects made of brittle plastic or glass that can break or shatter and expose sharp edges. Be sure that there are no detachable small parts than can choke a young child. Keep medicines and household products and poisons out of a child's reach. Remember, some poisons may not be obvious, such as lead-base paints. Look for the term "non-toxic" when buying paints. Watch for other safety labels, such as "flame resistant" and "hygienic material."

Remember, the wrong toy for the age level of the child can be a safety hazard. Purchase electric toys with caution and only for children who will use them with adequate supervision. Because young children have a natural curiosity, electri-

cal outlets not in use should be plugged with plastic plugs designed for this purpose.

Make sure that anything the child plays with is safe. Check a child's play area periodically. Play is serious business for children and safety is the responsibility of adults.

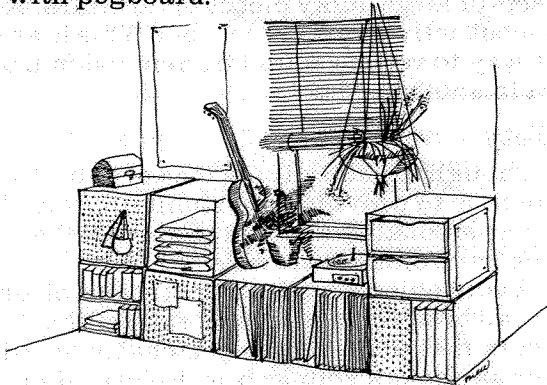
## Storage



Children need lots of space to store their collections, games and toys. They need furnishings that will adapt to their needs as they grow. Having personal storage and furnishings helps children define and create a sense of place.

Open storage or shelving is best for younger children. If their toys are in view, they will use and enjoy them more (and perhaps need fewer). Open shelving can be arranged and rearranged if constructed in sections. A good size for each section is 3 feet to 4 feet long, two or three shelves high, 27 inches to 40 inches high with shelves 12 inches to 15 inches deep. This size of storage relates to a child's size and permits flexibility of use. A three-shelf section makes a good room divider and can be used to separate play or work areas from sleeping areas.

Stacking storage cubes (simple boxes, left open on one side) can be piled up against a wall or, similar to shelves, used to divide a space. Plywood, particle board or high-impact plastic cubes or wire baskets offer endless arrangement possibilities. For more variety, close the fronts of several with pegboard.



For older children, enclose some of the shelving units to create "secret" hiding places for possessions, and solve the problem of constant clutter. While hiding places can be wonderful and exciting, they also must be safe. If the enclosed space is large enough for the child to climb into, make sure that any type of door or closure cannot trap the child. Remove any type of latching device. Enclosed shelving or cupboards with sliding doors are easier for children to manipulate and utilize all available space. Adjustable shelving within

the unit provides maximum flexibility by permitting full-width shelving for smaller items. All storage or shelving units should be stable enough to prevent tipping over in case a child decides to sit or climb on the unit.

Spice racks made for kitchen cupboard doors are good for holding paste bottles, paint jars or other small containers. When containers are necessary to hold small, easily misplaced items, use the durable, see-through plastic varieties. Since little hands often cram things away, choose containers large enough to hold the contents easily. Clear plastic allows the child to see what is wanted rather than rummaging through several boxes that leave contents askew.

Drawers—useful for clothing, paper items and handicraft materials—should be within easy reach of children's hands and equipped with stops so that the drawer is not pulled out on the child. Drawers that the child cannot reach may be used to store special clothing or items that should be used under supervision.

For hanging storage, closet rods should be low enough to the child to reach without climbing on a stool or chair—about 30 inches from the floor for preschoolers. Large hooks also are handy for coats and smocks.

Walls are excellent locations for storage. "Clutter" walls free valuable floor space for activities. Sheets of perforated wallboard (pegboard) with large hooks, mounted on the wall, provide a large amount of space for hanging objects. Small trays and shelf supports made to fit into the holes in the wallboard also are available. Sheets of plywood can be hinged to the wall, drop-leaf style, to make large work surfaces for a variety of activities.

Wall storage systems can be made or purchased in easy-to-install units. Many of these systems are modular and allow flexibility as the child grows. A wide variety of interior arrangements are available, combining shelves, drawers, drop-front desks, wardrobe compartments, as well as drop-down bed units.

If adequate storage is provided for the child, don't worry about its use. Children have their own sense of order—different from an adult's sense of neatness. This and a short attention span produces the "out-of-sight-out-of-mind" and "who-wants-to-clean-up-the-same-project-twice" syndrome. If adults set examples of neatness and orderliness, children in time will meet adult standards. In the meantime, oil the hinges and encourage the child to make use of the door.

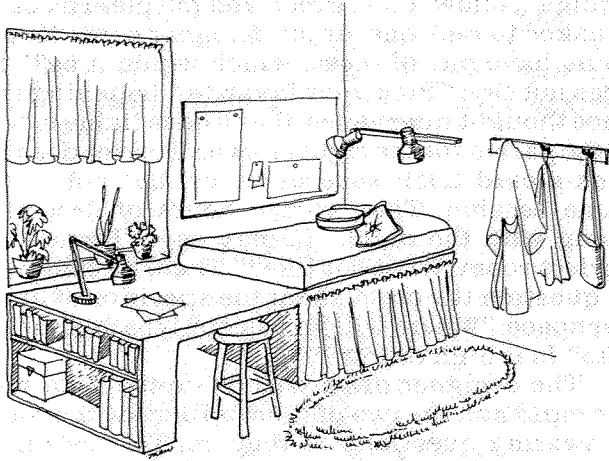
## Flexible Furnishings

Furniture should be kept to a minimum, particularly if the room is small, to allow space for activities. Select adaptable furniture that can continue to grow with the child. Cribs that convert to youth beds can later be used as love seats.

According to a 1989 study by *American Demographics*<sup>4</sup>, a baby costs \$5,774 in its first year of life. Furniture, bedding/bath supplies, and toys account for one-fourth of the total cost (or \$1,417) during the first year—more than food, diapers, clothes or medicine. Only day care costs exceed the costs of items found in a newborn's environ-

ment. It makes sense to utilize the family resources as wisely as possible.

If you have to make a choice, invest in a good mattress and box springs, or a good foam mattress on a solid base, rather than a headboard and bed frame. Adequate support for still-forming backbones is essential. Bunk beds save space but are practical only if they are easy to make up each day and if the child can safely climb to and from the top bunk. These beds should have guardrails and secure ladders. Some styles are designed as bunk or separate beds. Trundle beds also can be space-savers. Before purchasing, be sure there is sufficient floor space to bring the trundle out into the room when it is needed.



The majority of furniture in a child's environment should be small scaled. This permits

easy use and a feeling of dominance over the environment. The possible exceptions are the bed, because it represents a major investment, and an adult-size chair.

A small table and chairs provides hours of entertainment for a variety of activities. A good stain-proof laminated vinyl top can be mounted on a short base and later, as the child grows, be raised in height for continued use. Small chairs are relatively inexpensive and can become safe step-stools in years to come. Think about the activities children like to do and don't be afraid to design and construct your own children's furniture.

When choosing more permanent pieces of furniture, natural wood pieces treated with a clear protective finish are more likely to suit the taste of teenagers than the brightly-enameled furniture often found in children's rooms. Color can be added to rooms in more practical ways.

Children may differ enough in personality, interests and habits to become tired of sharing. If separate rooms are not feasible, furniture arrangements can provide visual and physical separation.

## References

- <sup>2</sup>Beck, David L. "A Room of Their Own," *The Denver Post*, (HomeStyle, p. 13+). January 5, 1990.
- <sup>3</sup>"Carpet Versus Sound," *The Carpet and Rug Institute*, Dalton, Georgia, 1978.
- <sup>4</sup>Cutler, Blayne. "Rock-A-Buy-Baby," *American Demographics*, January 1990, p. 35+.