The Importance of Space

Do you still have that loft?” a former student stops to ask Madeline Mulligan on the street.

In Madeline’s child care center, a homemade loft occupies a cozy corner. A science area is tucked underneath, and from upstairs you can see out the classroom window. Twenty years later, young adults still remember climbing the wide ladder to catch a few moments of peace, to watch the robin build her nest, and to gain a fresh perspective on the room’s activities below.

Through the centuries, those who care for children have understood the significance of a child’s surroundings. In the 1800s, Friedrich Froebel stressed the importance of environmental design in terms of a garden: natural, organic, and ever changing. He maintained that when care is applied to a child’s surroundings, behavior can be guided and inspired. The simplest of spaces can become a haven of play and learning.

Too often childcare takes place in society’s cast-off spaces: church basements or converted warehouses. Even centers built for childcare are often designed with more of an eye to adult priorities than children’s needs. Ideally, architect and child care professionals work together as peers to create the best possible environment for young children. No matter what your child care space is like, your decisions about room layout are crucial.

Are the children in your care deeply engrossed in their activities, or are many at loose ends? The difference may well stem from room layout. This booklet is designed to help you create spaces children will remember, even decades later, with love.

What makes a good space?

- Predictability
- Clear paths to activities
- Well-defined boundaries
- Enough opportunity for movement
- Freedom for exploration
- Privacy
- Variety
- Enough complexity (versatile open-ended units)
- Flexibility
- Varied levels of stimulation
- The right amount of empty space
- Inviting, welcoming, homelike feel

“Inspiring spaces are places of beauty. Beauty promotes wonder. Wonder instills lifelong learning.”

Sandra Duncan
Activity Areas

Child care professionals know that learning is a matter of discovery. Reasoning about fulcrums and centers of gravity may be fruitless, but a three-year-old who builds a lopsided tower soon discovers how to balance the blocks and distribute weight evenly!

A well-designed room allows children to choose from a variety of activities. There may be an area for reading, a block area, an area for projects, an area for active play. This room design uses the natural interests and impulses of children to their best advantage—children learn to make smooth transitions by themselves and in their own time, much as they would do if they were playing in their own home. It helps them develop their own routines and discipline, and supports happy, motivated play.

Many factors contribute to a room layout that encourages learning and discovery through play. Anita Olds maintains that these five attributes should be considered for each activity area:

1. Location: Is the placement within the room suitable to the function of the area?
2. Boundaries: How well is the area defined?
3. Play and sitting surfaces: Are they appropriate to the activities they support?
4. Storage: The materials children need in each activity area should be stored conveniently at hand, and displayed attractively for effective use.
5. Mood: Is the mood of the area appropriate to the function? Is it homelike?

“When a room has a variety of spaces, each of which supports a different function, activities can develop to their fullest.”

Anita Olds
When considering your room layout and the location of each activity, there are a few concepts to keep in mind.

**Predictability**
Children love to explore and discover, but they also rely on a certain level of predictability; they like to be in control of their environment. They like to know what’s going on and what will happen next. Entries and exits need to be clearly defined, and pathways direct. Activity areas need to be inviting islands, with room to detour around them. Even the layout of the building itself matters. Children find clusters of rooms more predictable than long corridors.

- Doorways should be obvious
- Traffic flow should be intuitive
- Rooms or areas should be clustered

**Room Regions and Zones**
To be successful, child care rooms must be organized in a practical manner. Start by dividing the space into wet and dry regions. Then, sub-divide the regions into zones. For example:

**Wet Region**
The **Entry zone** is where children’s personal effects are stored. There should be a place where children can sit to dress/undress. Sometimes a door in the entry zone opens onto the playground.

The **Messy zone** can contain tables, chairs, easels, woodworking benches, sand and water centers, nature study, and a kitchen area. It needs to have access to sinks, and ideally, access to the outside play area. This is also the most natural place to gather the entire group for meals or story time. The floor surface is an important consideration here.

**Dry Region**
The **Active zone** supports large motor play, wheeled vehicles, music and movement, climbing and dramatic play.

The **Quiet zone** contains blocks, manipulatives, construction toys, puzzles, books, games, or simply places to be cozy. Many of these activities happen on the floor. These activities do best in a protected or somewhat secluded corner.

“To act as an educator for a child, the environment has to be flexible: it must undergo frequent modification by the children and teacher to remain up-to-date and responsive to their needs.”

*Lella Gandini*
Boundaries encourage sustained play by protecting children’s activities from traffic and other distractions. Even in a small room, it is possible to create well-defined activity areas. You’ll be rewarded as you see children exhibiting a higher degree of exploratory behavior and social interaction. Efficient boundaries double as display and shelving space. These boundaries need not be permanent and must not interfere with supervision. Often a carpet or similar visual boundary defines space. But physical dividers can be used as well: solid or clear, high or low. They can be made of fabric, wicker or lattice, or of shelving. Some caregivers create a small corral or sunken theater to prevent toys from getting scattered.

Children often want to save their projects so they can continue them the next day. Edgington reports that if children are allowed to follow an interest over a period of time, motivation and concentration improve. Clear boundaries help protect the work and play of children.

To create a defined area, consider:
- Paths
- Movement
- Freedom to explore
- Privacy

Paths
When paths are well-defined, children move quickly and easily from one activity to another. Ideally, paths detour around activity spaces. They go to a destination that is clearly visible from a child’s point of view. Most of all, they don’t lead into dead space. Dead space often occurs when activity areas are placed around the wall, leaving open floor in the center of a room. Instead of moving through dead space, children tend to get stuck and distracted in counterproductive activities. Teachers can avoid dead space by placing a low activity area in the center of the room, causing a natural path to form around it and into other activities.

Jim Greenman observes that different paths encourage different types of behavior. “A meandering pathway with forks and T’s encourages shopping for an appropriate activity and perhaps observing the activities of others. A straight pathway with one beginning and one ending emphasizes reaching the destination. Unbroken paths encourage, perhaps even insist upon, running.”

Movement
Children need scope for movement. In fact, it’s actually critical for their intellectual development. Limited opportunities for movement have been linked to behavioral and learning problems. Caregivers can direct movement so that it is safe and doesn’t disrupt other activities.

“In an ideal setting, the children have access to rooms where they can withdraw from the main group if they wish, to play without interruption, to relax and daydream.”

Mark Dudek
 Freedom to Explore

Annemarie Arnold, a Froebel-educated teacher, recommends that childcare professionals “let children follow their own interests. If the whole interest of the child is captured, he will be creative.”

Buckminster Fuller says, “If you want to do something good for a child, give him an environment where he can touch things as much as he wants.”

Children need to explore using all their senses. It is important to allow them to move freely between activity centers to explore and experiment, mix and match. Hutt et al. observed a center where staff would not allow the activity areas to “cross-pollinate,” unwittingly preventing the children from making connections in the life-learning process. Dramatic play costumes want to find their way into the kitchen corner. It’s a natural result of role play. Allow children to take the art materials to the block area to make traffic signs for the city, or use the toy animals on the farm.

Inspiring rooms are organized in a way that encourages children to move, explore, and experiment, not in a housekeeping perspective that encourages children to sit still, be quiet, and not disturb the order of the center.

Children need freedom to:
- Explore using all their senses
- Move between activity areas
- Mix or connect different activities

Privacy

Variety and complexity can entertain children for a long time, but it is important to provide opportunities and places where children can play alone.

Children instinctively identify the most protected, secure space in a room. It is often the corner directly opposite the entry. This is the ideal place for a quiet zone, a place where children can go for a bit of privacy.

Cubbies and comfortable corners are a child’s favorite. They find it reassuring to put their backs against something solid. Even adults feel this way. This is why many people find a hospital waiting room unnerving—it is often a large, open space crisscrossed with chairs. Activity happens behind and around the chairs, making security and quiet waiting impossible.
Play and Sitting Surfaces

Playing and sitting surfaces must be appropriate to the activities they support. Consider each area: what do children do in this area? What props do they need to support this activity?

Variety
Children’s play areas can offer a range of occupations, and a variety of places in which to do them. A bookshelf, for example, offers picture books and reading books, fact and fiction, songbooks, and reference books. Some children read the text. Others look at the pictures or make believe they are reading, or perhaps sing from them. Still others copy text or pictures. So it makes sense to have different props to support the different activities that books suggest.

Paper and crayons in the book corner encourage children to copy pictures or letters. To encourage make-believe, you might have costumes; to encourage singing have some musical instruments. Consider a listening center for enjoying audiobooks. If you want to encourage collaboration, perhaps you will have a couch instead of individual chairs.

Variety is important in all areas, indoors and outdoors. It stretches children’s imaginations and keeps them interested. Consider:

- Small motor activities and large muscle play
- Solitary play and cooperative group play
- Open-ended play and prescribed activities
- Sensory stimulation and islands of quiet

“When children are offered flexible furnishings and open-ended materials, they engage in the range of activities that best fosters their development and learning.”

Deb Curtis, Margie Carter
When it comes to storage, there never seems to be enough. As one of the five most important attributes of activity areas, storage must be considered early in the room layout process.

According to Jim Greenman, good storage is:
- Located close to the point of use
- Comfortably holds and displays contents
- The right size and shape
- Aesthetically pleasing
- Clear and understandable to children and adults
- Safe

Shelves that are deep and of appropriate height can hold children's sculptures, objects, or nature exhibits. This practice conveys without words that this is the children's space, and demonstrates the respect the teacher has for their work.

Some centers display relevant books around the room, bringing literacy beyond the book corner.

Well-designed storage shelves provide display areas on their backs. This supports the logical practice of using shelving to define the boundaries of activity areas, and saves precious wall space.

Don't neglect the need for personal storage. Children have their cubbies, but teachers also need space they can call their own.

Finally, each area—whether it accommodates books, manipulatives, sand and water, blocks, or large muscle play—has characteristics that must be reflected in the storage methods employed there.

Flexibility

The ideal room is an empty shell filled with movable furniture. Built-in features severely restrict flexible room arrangements and the opportunity for future changes and improvements. Avoid built-ins, and consider movable storage shelves. This allows manipulation of the environment by teachers and children.

A flexible room layout allows for:
- Changes in enrollment
- Staff preferences
- The varying needs of different groups
- Seasonal changes
- Changes in children's interests or educational objectives
- Adapting to meet behavioral needs
- Children's ideas to suit their play
- ADA compliance

With portable screens and dividers, you can create versatile, changeable interest areas that hold children's attention. For example, expand an area for a group gathering or create a small cozy space for individual work. Supply children with large hollow blocks, boxes, and pillows so they can create spaces to suit their play.
Empty Space
The amount of space in a room and how it is organized affects children’s behavior. A tight space may encourage working together but can also lead to aggression and frustration. Reducing clutter and installing flexible furnishings can maximize the use of each area. On the other hand, too much space in a room can cause children to be restless and unfocused and reduce interaction with peers. Using dividers to create activity areas or pockets reduces distraction and can help teachers facilitate absorbed play.

Rooms should have a balance of well-defined spaces for a variety of activities, suggesting a mood that reflects the task in each of these mini-environments. For example, the reading area should be quiet and soft; the art area, colorful and creative; and the dramatic play area, imaginative and fun. Children take cues from the environment to regulate their behavior.

Research and experience show that too many hours spent in an institutional setting are stressful for children and can have a negative effect on their development. It is therefore important to provide homelike surroundings so that children can be relaxed, comfortable, and free to learn. Plants, area rugs, and wall hangings create a beautiful and caring atmosphere. Keeping children and staff relaxed and happy is a key factor for reducing stress. A well-organized, homelike environment encourages good behavior and positive interaction.

Ann Epstein points out, “When children are in a large space, they feel small in comparison to their surroundings, and time seems to pass more slowly for them. When children are in a playhouse, in a play yard tent, or under a table they feel large in comparison to their surroundings, and attention seems to be sustained. The size of the child’s play space affects the quality of the play and thus the potential for learning.

Altering space to make children feel large in relation to their environment may enable children to enter complex play more quickly and to continue complex play for longer periods of time.”

Inviting Play
Good design can clearly create a sense of welcome. In general, curves are perceived as warm and

“A spirited place satisfies children’s souls. It possesses a wholeness that makes the heart sing, the soul rejoice, the body feel safe and at rest.”

Anita Rui Olds
feminine, while straight lines are hard and masculine. Obtuse angles are inviting and acute angles are rejecting. To be really welcoming, the reception area should be concave in shape. The whole area should be intimately scaled and child-oriented. A fish tank can work wonders. So can natural light.

In addition, Chizea et al. say, “All children—and all adults—should be able to find positive images of the group of people with whom they feel themselves to be identified. This includes issues of culture, ethnicity, age, and gender, and also people’s abilities/disabilities.”

Vicki Stoecklin says, “Well-designed spaces should reflect the style, cultural values and architectural heritage of the surrounding community. Each classroom should also reflect the personality of both the children and adults who work there.”

A well-designed space encourages parents to stay and interact, creating a bridge between home and center. The unspoken message of your center should be, “We understand children; you can be a child here.”

A welcoming center or room includes:

- Opportunities for play
- Creative use of light, both natural and artificial
- Curves vs. straight lines
- Obtuse vs. acute angles
- Concave vs. convex shape
- Opportunities to explore
- Counters and interest areas at child height
- Opportunities to work on the floor

Memorable

Jim Greenman notes, “Objects lay claim to our feelings because of associations and qualities of the objects. Wood, leather, and some natural stone and brick objects beckon to be touched. Objects made of these materials tend to wear with grace. The smoothings and cracks and weathering and nicks often add character.”

Memorable centers are places of wonder and enchantment. They do not feel completely civilized and repressed. The challenge for child care practitioners is to foster freedom and delight, and provide places where the enchantments and mysteries of childhood can be given full expression.

“It is the spirit of a place that makes it memorable, that expands our sense of possibility and puts us in touch with what is most loving, creative, and human about ourselves.”

Anita Rui Olds
Equipment and Materials

Thus far we’ve considered the layout of individual activity areas in a room. But what about the actual equipment and materials within those spaces? Here are a few ideas to help you make good choices.

Quantity
Are there enough units in your room to keep children happily occupied? The right balance helps to avoid conflicts and allows for smooth transitions from one play place to the next. Conversely, if there is only one play place per child, the child who finishes his activity will have very little choice over what to do next.

This formula can help avoid conflicts. Start by comparing your layout to a game of musical chairs. When “the music stops” there should be plenty of play places to choose from, more than 1.5 per child. Divide the number of play places by the number of children expected to play there to help you establish successful layouts.

Play places are linked to the complexity of each unit. (See sidebar and chart.)

Stimulation
Nature offers us the best example of an environment; it stimulates all the senses in a variety of ways. Large areas like the grass, sky, and earth are green, blue, or various shades of brown. The smaller points of color are mainly primary colors. Blue, green, and brown are calm colors, while red and yellow are exciting.

Light and reflection help bring this level of interest indoors. The interplay of light and shadow can be captured by a rattan screen hanging in a window and blowing in the breeze. Mirrors also stimulate beautiful play.

Take care that transitions are gradual and predictable so as not to intimidate. A transition area helps alert the children that they are entering a new space with different limits and possibilities. This link may be as simple as a doormat, a doorstep, or a porch or entryway with cubbies.

Consider:
- Equipment
- Floor surface: carpet, tile, wood
- Outside surface: pavement, grass, bare earth

<table>
<thead>
<tr>
<th>Complexity</th>
<th>Children need equipment with enough complexity to hold their interest for an extended time. Kritchevsky suggests that equipment can be categorized into four types:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A potential unit</td>
<td>is a clearly defined space with no play materials, for example an empty table. It is important to identify these areas and predict the kind of activities that may develop. (0 play places)</td>
</tr>
<tr>
<td>A simple play unit</td>
<td>has only one obvious use, and no subparts or additional materials. Consider a tricycle or a swing. Usually only one child can play with a simple play unit, and sometimes that is just what is needed. (1 play place)</td>
</tr>
<tr>
<td>A complex play unit</td>
<td>has sub-parts or several materials that allow you to improvise. A sensory table is considered a complex play unit. Children may also discover that by combining two simpler units they can create a more exciting system. When road signs are added to the tricycle area, it becomes a city street. Unit blocks are inherently open-ended. When cars, trucks, farm animals, and toy figures are added to a block set, the level of interest is raised, but the way in which the blocks are used becomes more specific. (4 play places)</td>
</tr>
<tr>
<td>A super play unit</td>
<td>has three or more play materials, for example: a home corner with dolls, dishes, and dramatic play costumes. (8 play places)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example</th>
<th>Number of obvious uses</th>
<th>Number of different subparts or materials</th>
<th>Number of play places per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential unit</td>
<td>Empty table</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Simple play unit</td>
<td>Tricycle</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Complex play unit</td>
<td>Sand &amp; water table</td>
<td>Multiple</td>
<td>1 or 2</td>
</tr>
<tr>
<td>Super play unit</td>
<td>Home corner with dolls, dishes, and costumes</td>
<td>Multiple</td>
<td>3 or more</td>
</tr>
</tbody>
</table>
About Contrasts
Nature offers plenty of variety and contrasts. Anita Olds maintains that children need these contrasts.

In/Out: indoors and outdoors, accented by windows, porches, fences, and transition areas
Up/Down: varying heights of floor and ceiling, such as steps, ramps, and lofts
Light/Dark: bright areas and dimmer corners, using lattices, screens, curtains, and awnings
Exposed/Tempered: wet and dry, hot and cold, windblown and still, such as porch, garden wall, shrubs, shade
Something/Nothing: a wall versus a window, empty vs. cluttered space like window seat, arches, alcoves, or corners
Order/Mystery: order versus chaos, predictability and surprise such as partially concealed entrances, winding paths, possibilities for discovery

Guiding Environments
To help children understand what activity is appropriate, areas in a room can be designed to convey their possibilities and limits. They can move from place to place without a lot of instruction. Choice of activity is empowering.

Studies show that the arrangement of materials and equipment affects how they are used. Nash observed that materials and equipment stored close to each other are often used together. Teets found that when materials are displayed systematically, children can see how the materials are categorized and make much better use of them. The arrangement of equipment supports learning and self-reliance without continuous teacher intervention.

Indoor Air Quality
The indoor air children breathe affects their health and development. To quote Anita Rui Olds’ Child Care Design Guide: “Unlike in the past, when wind was relied upon to bring fresh air into buildings, and leaky building envelopes allowed indoor pollutants to move outdoors, today’s buildings have become more tightly sealed, and mechanical cooling and heating systems are common in all climate zones. At the same time, thousands of new materials and products used as goods, finishes, and furnishings have increased sources of interior pollution. Indoor air quality depends upon the absence of pollutants, the power of ventilation systems to pump fresh air indoors, and the power of filters to remove polluting substances. The choice of ventilation system will affect children’s current and future respiratory health and their environmental and chemical sensitivity. … Avoid using materials that off-gas volatile organic compounds into the air, particularly formaldehyde-based finishes, adhesives, carpeting and particleboard.”

To provide the best protection for children, Community Playthings furniture is certified to the Indoor Advantage Gold standard; one of the toughest certifications for indoor emissions and so far, the only human health-based standard for indoor air quality.
The fixed features of a building can constrain its interior design. Where possible, fixed features should be kept to a minimum to allow for greater flexibility. For example, try to keep to the minimum of two doors per room and avoid built-in partitions and shelving. Consider, too, features like electrical outlets, plumbing, floor surfacing, and lighting, including all-important natural light from windows. Once the room is created, here is a step-by-step guide on how to lay it out.

1. Make an overall room plan.
   Draw the basic shape of the room, to scale, on graph paper. Mark in the fixed features: windows, doors, sinks, floor surfacing, heaters, and posts.

2. Mark in the flow.
   Paths must have direct access to all areas and doors. Main flow goes from the entry door to all other doors, exits, bathrooms, and storage closets, with one path going into the center of the room.

3. Locate and circle the protected corners.
   This will help you reserve prime space for quiet activities such as reading. In general this will be the farthest from the entry door. Avoid doors or flow-paths going through.
4. **Divide your space into wet and dry regions.**

   **Wet region:** Apply the “3F” rule to determine the wet region: flow, flooring, and fixed plumbing (sinks and toilets).

   **Dry region:** Should contain at least one protected corner and can be carpeted.

5. **Subdivide these regions into zones.**

   **Wet region:** Entry zone, Messy zone
   
   **Dry region:** Active zone, Quiet zone,

6. **Locate activity areas.**

   Use the chart below to help you decide what areas are needed and place them on your grid.

<table>
<thead>
<tr>
<th>Entry/Transition zone</th>
<th>Quiet zone</th>
<th>Messy zone</th>
<th>Active zone</th>
<th>Additional spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s personal storage</td>
<td>Sleeping/resting</td>
<td>Toileting or changing</td>
<td>Large blocks</td>
<td>Large group meeting</td>
</tr>
<tr>
<td>Staff personal storage</td>
<td>Reading</td>
<td>Eating/snack</td>
<td>Dramatic play</td>
<td>Private &amp; semi-private</td>
</tr>
<tr>
<td>Parent sign-in &amp; communication</td>
<td>Listening</td>
<td>Water</td>
<td>Housekeeping</td>
<td>Staff work area &amp; telephone</td>
</tr>
<tr>
<td></td>
<td>Manipulatives</td>
<td>Sand</td>
<td>Doll play</td>
<td>Staff project storage</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>Clay</td>
<td>Miniatures</td>
<td></td>
</tr>
<tr>
<td>Small blocks</td>
<td>Painting</td>
<td></td>
<td>Puppet play &amp; store front</td>
<td></td>
</tr>
<tr>
<td>Maths</td>
<td>Art/woodworking</td>
<td></td>
<td>Music &amp; movement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cooking, science, nature &amp; pets</td>
<td></td>
<td>Gross motor play</td>
<td></td>
</tr>
</tbody>
</table>
7. Plan the areas you have created.

Include storage for items used in that area. Your plan should communicate possibilities and limitations. For example, a space with little cozy nooks communicates, “Here is a place for quiet play.” An arch across the entry tells you, “Leave your tricycle outside, you are entering a protected space.”
References


Chizea, C., A. Henderson, and G. Jones Inclusion. PLA


Duncan, S. Rethinking the Classroom Landscape. Lewisville, NC: Gryphon House, 2016.


Suggested Reading


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Our designs shape children’s beliefs about themselves and life. In a well-designed area, children are engaged and feel secure. A well-designed area can facilitate predictable, consistent, and intimate care for each child.

Anita Rui Olds

Resources

Take advantage of our free staff development tools for early childhood educators and administrators. Learn how the classroom environment can best benefit children. Request online at communityplaythings.com or phone us at 800-777-4244.

- **The Wisdom of Nature**
  **Out My Back Door**
  Twelve respected educators including Nancy Rosenow, Elizabeth Goodenough, and Rusty Keeler convey why nature is vital to every child’s creative, social, and intellectual development.

- **Infant and Toddler Spaces**
  **Design for a Quality Classroom**
  Design your own infant and toddler room with these guidelines for developmentally appropriate spaces.

- **Foundations**
  **The Value of Unit Block Play**
  This instructive video illustrates the value of unit block play for young children. (30 min)

- **The Stuff of Childhood**
  **Play Equipment to Support Early Education**
  A guide to choosing play equipment that supports your developmental goals for children.

- **Spaces for Children**
  **Spaces for Children**
  Takes you on a virtual tour of 8 unique centers, featuring interviews with the center directors. (15 min)

- **Community Playthings Catalog**
  Community Playthings has been manufacturing solid maple furniture and toys for childcare settings for over 65 years.

- **Community Blog**
  Weekly postings on the importance of play, classroom design, outdoor learning, and much more. Sign up at: communityplaythings.com/resources/blog.