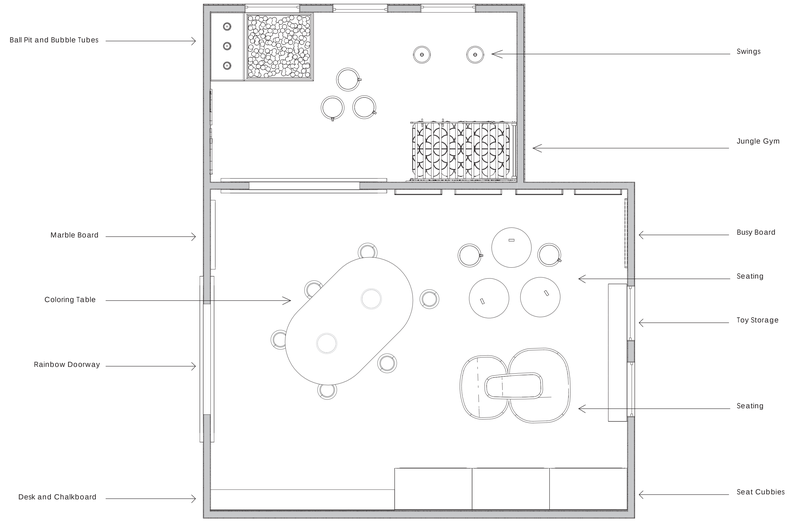
DESIGNING A MULTISENSORY PLAYROOM FOR CHILDREN WITH AUTISM

Multi-Sensory Environments (MSEs) are designed with two goals in mind: to promote intellectual activity and to encourage relaxation.

Children's moods are strongly affected by lighting: for some it provides a calming, soothing effect and for others it acts as a stimulant. Harsh lighting can often hurt the eyes of a person with autism. Flickering, humming lights can be very distracting and sometimes painful. It's often advised to use adjustable lighting to create a calming effect. Certain light levels and colors can be beneficial and the ability to control visual stimuli within the space is important. Creating a sensory room can aid to stimulate, develop and balance a person's sensory system. Sensory rooms can include: soothing music, vibrating cushions, fiber optics, mirror balls, bubble tubes, water beds, tactile walls, disco lights, projectors and equipment that is activated by switches, movement, sound or pressure, so that a child can learn about cause and effect.

With Autism now affecting 1 in 110 children and 1 in 70 boys, it's imperative that architects, interior designers and color professionals be aware of the specific design requirements, for this growing population. Special consideration needs to be given when selecting colors and finishes, particularly for public spaces where children frequent such as playrooms.

Autistic children frequently have difficulties with sensory integration, which are the senses that are experienced through sight, touch, sound, taste and smell. They rely on their visual senses to tell them what is happening since them often difficulty decoding verbal cues. Here's another important fact that we need to keep in mind, when selecting color for children's spaces. Researchers have found that autistic children's rods and cones (components of the eye) have changed due to chemical imbalances or neural deficiencies. Colors appear more vibrant to autistic children. Of the autistic children tested, 85% saw colors with greater intensity than non-autistic children. Red for example, looks fluorescent and vibrates with intensity.



Pink was applied to the back space walls to help with calming the children in the space. Swings were added for their calming affect as well.

Cubbies for with added toy storage below that allows toys to be out of sight. The cubbies supply a space within the playroom for the kids to be able to "escape" and be alone. The interior is done in a pink color because this specific shade of pink often called, Baker Miller Pink, has been proven to have calming abilities.

More than 1,000 iridescent marbles fit into a steel grid on the panel that is illuminated by diffused lighting. As children turn the marbles, they receive visual, tactile and aural sensory input, and experience a calming sensation.

Busy boards help keep children busy. They are essential for the development of motor skills, imagination and intellect.

A rendered floorplan of the playroom.

A rock wall and jungle gym.

A table for coloring and a desk with a chalkboard wall give the children a place to create and learn. Storage cubbies have door fronts to allow storage of toys to be out of sight. Soft seating is added to the space as well to allow the children to relax.

A rock wall and jungle gym.

A Multi-Sensory Environment is a dedicated space or room where sensory stimulation can be controlled (intensified or reduced), presented in isolation or combination, packaged for active or passive interaction, and matched to fit the perceived motivation, interests, leisure, relaxation, therapeutic and/or educational needs of the user.

1. Lighting effects: such as projectors with wheels that disburse light patterns on walls through the space.
2. Tactile Experiences: such as toughing various, changing textures that are included within a tactile wall panel.
3. Cause and effect: items such as the use of switches to allow the individual to control the items within their own environment, and toys that provide visual effects, vibrate, make noise, or have a tactile feel.
4. Soft Items: on the floor such as mats, pillows, or beanbags.
5. Selected rhythmical music: with a variety of tone, pitch, rhythm, and spacing can be used to sooth children.

Bubble Tubes and Lighting
People with Sensory Processing Disorder (SPD) get a positive response when watching bubble tubes in action, since they provide a tracking activity that helps to improve visual development, color recognition, visual perception and communications skills. The bubble tubes themselves can promote and enhance children's level of relaxation, creating a calming effect.

Tactile Walls
The aim of tactile wall panels (commonly called busy boards) is to provide the users of the space with tactile stimulation, provide auditory stimulation, visual stimulation, to provide an object of interest that users can share with someone else, to motivate the person to explore, to provide as space that users can express likes and dislikes to specific textures, and the opportunity to make choices about which wall to explore.
1. Touch: as in feeling different textures
2. Movement: as in moving objects, encouraging users to feel and touch it
3. Seeing: different textures and colors
4. Hearing: listening to different objects moving within the board
5. Smelling: by incorporating a pocket which holds cotton wool with essential oils to the wall panel.

Bubble tubes and a ball pit with the lighting effects turned off.

Bubble tubes and a ball pit with the lighting effects turned on.

COLOR STUDY

Orange
- an energetic, warm color
- choice for rooms that need to be playful but sophisticated
- gender neutral

Yellow
- can strain the eyes
- people tend to lose their tempers more in yellow rooms, and babies exposed to lots of yellow cry more
- can increase concentration and boost energy
- pairing it with cooler, more restful colors (like blue, green, or purple) can minimize negative effects and still let you enjoy its warmth

Blue
- a very calming, restful color
- very cool
- increases productivity
- increases feelings of trust and loyalty
- dampens the appetite
- the wrong shade (too dark) can also contribute to feelings of sadness

Pink
- exposure to pink initially promotes a calming effect
- but can eventually increase feelings of stress and anger, according to prison studies
- say pink makes some people feel happy

White
- makes a room feel refreshing and pristine
- white ceilings give the illusion of height
- too much white, however, can make a room look boring, or worse, cold and sterile
- Offset this effect by choosing off-white instead of a true, blinding white, and add some color

TIPS:

- Use non-defined patterns in fabrics, flooring and wall covering.
- Color schemes should minimal hues; muted colors are preferred.
- Put books, toys and other distractions out of sight; place them behind cabinet doors.
- Draperies and shutters are distracting; use simple, inside mount blinds
- Although color preferences vary from individuals, studies have shown that many autistic children favor pale pink.
- Reduce the use of primary colors to light weight toys, which can be removed from the space if needed.
- A monochromatic color scheme instantly creates a peaceful environment.
- Cool colors such as blue and green typically have the most soothing effect.