Training and Information Packet

Learn about:

Multi Sensory Environments (MSE)

The Benefits of MSE

The Protocol for using Special Haven effectively

In Preparation for Hands on Training
Multi Sensory Environments (MSE) and Training in Sensory Enrichment

There are no guarantees in life, except that everyone faces struggles. This is how we learn (and grow). Some face struggles from the moment they are born. They are the most special of all people, requiring the most care and compassion and reminding us that love is the sole purpose of life.” – (Elisabeth Kübler-Ross).

These are our Hidden Angels – teaching all of us life’s most valuable lessons!!

Throughout Europe and the United Kingdom, Multi Sensory Enrichment ™ (MSE) has been used as an educational tool and leisure activity for individuals with intellectual disabilities. More recently MSE has become popular in the United States. It is our objective that the Hidden Angel Foundation and its training efforts will provide direction in the future practice and research of Multi Sensory enrichment. With the hope that this leads to enhanced quality of life, health, and social well-being for children and adults with intellectual, physical and emotional challenges.

By adapting and modifying the environment we enable the empowerment of children and adults with significant disabilities. Multi-sensory environments provide alternative and powerful forms of sensory stimulation for individuals who have previously been isolated in their perceptual disabilities, providing new ways of encouraging learning, motor development, cognitive development, language and social interaction skills.

Rationale and purpose of MSE

The main objective is that through the use of MSE, quality of life, health, and social well-being of people with various challenges will be enhanced.

The purpose of this training is:

First, to provide a definition and overview of MSE, and provide a delivery model of MSE.

Second, provide tools, protocols and hands-on experience for effective used of the equipment to achieve our main objective of providing a safe and optimum multi sensory experience for children and adults with special needs.

Disability Defined:

- MSE can be beneficial for all children
- They are particularly important for people with disabilities because essential services and educational tools are needed to support learning, social integration, and sensory integration for children with disabilities.
- People with disabilities constitute the largest minority group for whom access to public places, education, and the political sphere is still limited. Society creates a handicap [disability] when it fails to accommodate the diversity of all its members,” when attitudinal and environmental barriers prevent “full, equal and active participation in society”.

Thus, disability is a social construct and one that can be changed.

- When physical barriers are removed, attitudinal barriers are nil leading to community inclusion.
- MSE may be seen as a tool to remove physical and attitudinal barriers.
- People with disabilities simply have different challenges and different capabilities. Everybody has possibilities and potential.

People with a developmental disability often have the unique capacity to touch our lives. They have gifts of welcome and spontaneity, and their sensitivity to matters of the heart allows them to break the barriers, to enrich and challenge us as human beings.” --- L. Arche Noah Sealth, Seattle
The Need for MSE

Sensory stimulation is a basic human need that is essential to life and survival. We must assist those who are unable to access sensory stimulation on their own due to disabilities and/or impoverished environments. MSE can provide such essential stimulation.

MSE provides a whole new world for individuals with cognitive, emotional, and physical challenges.

The Rationale for a MSE

Sensory stimulation enriches our lives.
A person will fail to thrive - and often withdraw - when their environment offers nothing.
People with cognitive, emotional, and physical challenges rarely, if ever, experience the world as the majority of us do.
Limitations of movement, vision, hearing, cognitive ability, behavioral difficulties, perception issues, pain, and other problems limit ability to interact with and control their surroundings.
The level of function achieved by an individual is a reflection of the stimulation and opportunities afforded the individual by his or her environment.
An individual must be provided with a great enough stimulation to get through even the poorest sensory channel.
Stimulation that is produced in the sufficient frequency, intensity, and duration, increases brain arousal, improves the organization of the brain, and permits increased functional activity.

MSE provides new ways of:
- Encouraging learning
- Motor and cognitive development
- Language and social interaction skills

MSE has been shown to increase:
- Awareness, concentration, and alertness
- Brain arousal
- Exploration
- Choice
- Mental and physical relaxation
- Enjoyment
- Improved Social Well Being and Quality of Life

Multi Sensory Environments - The History

Cleland and Clark – 1966
Introduced Sensory Cafeterias to advance individuals with cognitive and behavioral impairments

Verheul and Hulsegge (Netherlands) – 1970
Developed the “Snoezelen” to enrich the lives of individuals with severe cognitive impairments and disabilities. A concept of recreation and relaxation opportunities for disabled adults.

AAMSE (American Assoc. of MultiSensory Environment) - 2006
Today Multi-Sensory Environments benefit every age and target individuals with cognitive and physical disabilities, brain injury, Autism, sensory deficit, dementia and young children.
Multi Sensory Environments (MSE) Defined

The sensory input we take for granted every second -- seeing, hearing, touching, moving, and more -- is vitally important to individuals challenged with physical, or developmental disabilities.

A MSE is a dedicated space or room where multiple sensory stimulation is used as an educational tool or recreational activity for individuals with disabilities in order to increase brain activity and as a result, enrich their lives.

MSE are designed with two goals in mind: to promote intellectual activity and to encourage relaxation.

They are artificially created and controlled environments designed for active or passive interaction, and as much as possible are matched to fit the perceived motivation, interests, leisure, relaxation and/or educational needs of the user.

The multi sensory environment is a medium for communication that centers around a natural process of multi sensory stimulation that is accessible, demand-free, choice-driven, empowering, meaningful, and pleasurable. This is based on the needs and interest of the person with respect, equality, and human dignity. MSE can be used in different applications including recreation, leisure, education, and therapeutic (a perfect environment for OT, PT, speech and behavioral therapies.)

The goal, in all applications, is for the multi sensory stimulation to change brain arousal to improve neurological physiology and functional ability leading to improved communication, quality of life, and well-being.

The multi sensory stimulation approach can be tailored in intensity and frequency of stimulation to individual thresholds (consisting of auditory, visual, tactile, gustatory, olfactory, and kinetic modes) in an attempt to increase or decrease arousal, improve awareness and elicit a meaningful behavioral response.

MSE provides a feedback loop where a facilitator makes observations and keeps the individual engaged in the MSE experience. The feedback loop allows for each MSE experience to be different and suited to the individual.

Three groups benefit from the use of multi sensory stimulation:

 offenders with profound disabilities who, because of a disability, have limited opportunity to access multi sensory stimulation on their own, such as people with mental retardation, dementia, learning disabilities, etc., Their sensory experience is limited.

 offenders who may have sensory processing challenges and need varying sensory stimulation in order to process self-regulation, such as people with autism.

 offenders without disabilities where multi sensory stimulation and experiencing the environment is a basis for learning and relaxation, such as infants and preschool children.

Sensory Experience:

Children and adults with disabilities and other complex conditions often find the world confusing, boring, restrictive, and over or under stimulating.

This can often lead to stress, frustration, dependence, lack of control and/or sensory deprivation.

For Example: “The average person touches 300 different surfaces every 30 minutes" 

“The average person with a profound disability will likely touch 1 – 5 surfaces in the same time frame "

“We all need to understand that behavior is always communication, it is always telling us something.” Lorna Jean King - Centre for Study of Autism
**Sensory Deprivation:**

Often results in: impaired functionality, impaired cognitive skills, lowered sensory acuity, limited memory, limited focus, low engagement and reduced opportunities for personal interaction which often leads to behavioral challenges.

“Our sensory diet needs are similar to our nutritional diet needs. We need the right combination of sensory input to keep an optimal level of alertness and performance.” Patricia Wilbarger OTR June 1995, Sensory Integration

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**Sensory Defensiveness (as defined by Patricia Wilbarger)**

- A constellation of symptoms concerning aversive or defensive reactions to non-noxious stimuli across one or more sensory modalities
- Reaction involves primitive survival and arousal mechanisms which have a potentially negative effect on every aspect of a person’s life.
- Two components of Sensory Defensiveness are Sensory Defensive Behavior or Emotional Behaviors (Affective Disorders.)

**Mild Sensory Defensiveness**

- A normal system pushed to extreme.
- These people are considered “Touchy”, “Slightly Picky”, and “Slightly Controlling”
- They can be close with relatives and a few close friends
- They can be affectionate with loved ones, have a social life and recreational pursuits.

**Moderate Sensory Defensiveness**

- Two or more areas of life are involved, primarily self-care and relationships.
- Categorized by seeking and avoiding behavior, with extreme control of the sensory environment.
- Intimacy is difficult and is with only a trusted few.
- They can be thought of as “Controlling”, “Compulsive”, “Phobic”, “Anxious”, “Avoiding”, and often suffer from “Stress and Anxiety Disorders” an/or “Sleep Disorders”.
- They typically avoid crowds, shopping, movies, theaters, elevators, and any extraneous noise.

**Severe Sensory Defensiveness**

- All aspects of life are affected.
- They have rigid routines, often can not work, if at all, only in sheltered work.
- They are very isolative, avoid particular sensory input or seek out a particular input, and are often self-abusive.
- They are often considered to be “psychotic” or near “psychotic”.

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**Features of MSE**

MSE feature equipment focusing on visual, tactile, auditory, olfactory, gustatory and proprioception stimulation including:

Interactive tactile walls, interactive switches for all abilities, Bubble tubes, Fiber optics, Ball pools, Mirror balls, Soft floors, water beds, cushioned bases, Effect projectors, Vibroacoustics, Music and sounds.

**MSE Provides:**

A relaxed atmosphere, Pleasant surroundings, Soothing sounds, Intriguing aroma, Interesting lighting effects, Comfortable seating, Choice of sensations, Opportunities for interaction and engagement. The room can be transformed from stimulating to relaxing by changing the music tempo and the effects used in the room.
The Value of MSE

- New ways of encouraging learning, motor development, cognitive development, language and social interaction skills.
- Alternative and powerful forms of sensory stimulation for individuals who have previously been isolated by their perceptual disabilities.
- A whole new world for individuals with cognitive, emotional, and physical challenges.

Who Benefits from MSE:
Individuals with: Autism, Cerebral Palsy, Profound multiple disabilities, Developmental disabilities, Chronic Pain Syndrome, Hearing Impairment, ADHD (Attention Deficit Hyperactivity Disorder) and ADD (Attention Deficit Disorder), Pervasive developmental delays, Mental dysfunction, Brain injury, Stroke, Alzheimer’s and Dementia.

Illustrated Results of MSE:
- Enable and empower children and adults with significant disabilities.
- Provides a pleasurable experience of a variety of sensory motor activities.
- Produces an atmosphere of trust and relaxation or heightened awareness.
- Promotes self-choice.
- Increases concentration, awareness, and alertness.
- Improves coordination and motor development.
- Enhances cognitive development and increased brain function.
- Encourages more social interactions and more vocalization.
- Induces relaxation and less stress.
- Increases opportunity for choice and self-determination.
- Relieves pain.

Why is MSE Important for Development and Learning?
- Our sensory system is the window to the brain.
- Sensory experience is a precursor to all development.
- Multi sensory experiences affect our motivation, attitudes, emotions, learning, physical activities and our very being.
- The constant stream of data obtained through our senses gives us vital tools to survive and thrive.

MSE and Development
- By working towards a better organized, stronger, and more efficient nervous system, individuals become better able to demonstrate and access their true potential.
- The ultimate goal of MSE is to facilitate recovery or improvement of the nervous system so that individuals are able to process information of increasing variety and complexity.
- Multi sensory stimulation is essential for individuals with disabilities, where sensory pathways are stressed and have not formed the appropriate connections.
Overview of Neuroanatomy and the Senses

The Olfactory Nerve

Olfactory Stimulation

The sense of smell is the olfactory sense. The olfactory receptors are cells on hairs extending from the ends of the olfactory bulbs. The smell receptors are stimulated by gaseous molecules, although the exact mechanism is unknown. The afferent pathways for smell funnel directly to the brain through the limbic system, displaying the primitiveness of this sense organ. Thus, smell has a more direct route to the brain than other senses.

The Gustatory Nerve

Gustatory Stimulation

The perception of taste is augmented by smell and touch. To a person whose nostrils are shut tight, a raw apple tastes the same as a raw potato. There are four primary tastes – sweet, sour, salt, and bitter. The taste receptors are in taste buds distributed around the tongue. The number of taste buds decreases with age.
The Auditory Nerve

**Auditory Stimulation**

Auditory stimulations, the stimuli for hearing, are vibrations (sound waves) transmitted through the air. The vibrations stimulate nerve fibers in the ear, which generate impulses. The nerve impulses terminate in the auditory area of the temporal lobes of the brain and sound is thus perceived.

The Visual System

**Visual Stimulation**

Visual stimuli are created by fibers in the eye responding to direct stimulation as well as to stimulation of neighboring fibers. If a receptor is responding to a weak stimulus but a nearby receptor is responding to a stronger stimulus, the weaker response will be inhibited by the stronger. The effect of this is to accentuate borders and contours (i.e., differences) and to obscure uniform fields (i.e., habituation). Lateral inhibition functions for the cutaneous, auditory, and gustatory modalities. There are environmental cues to which the organism is prewired to respond, presumably those cues that are most necessary for survival (Kaufman, 1987).
The Vestibular – Ocular Reflex

Vestibular Stimulation

Vestibular sensations arise from firing of the vestibular apparatus in the inner ear and influence one’s movement and motion. The vestibular system talks to and influences every other system. Vestibular perception or sense of gravity provides input to the middle ear and its balance mechanism, including activity such as rolling, swinging, seesaw, merry-go-round, and other rocking activities. Some people will become dizzy and nauseous; others will show no reaction.

Proprioception

Proprioception Stimulation

Proprioceptive sensation is tied to receptors embedded in muscles, tendons, and ligaments that help us identify where body parts are in space. Proprioceptive sensations help us feel grounded, secure, organized, settled, and calm. The best proprioceptive sensory feedback is active movement of the muscles and joints and when the muscles contract against resistance. Some children will crave these activities and others will show no reaction. Activities that encourage proprioception are jumping, hopping, or tumbling. Every effort of voluntarily walking, standing, or running gives motion to the body and is directed by a sense of the condition of the muscles. Without this sense we could not regulate the actions of the muscles.
The Sensory System

**Two sensory systems:**

**The dorsal column** – medial lemniscal system
Dorsal column – medial lemniscal system: Carries sensory information for discriminative touch, joint position sense, vibratory, and pressure sensations from the trunk and limbs.

**The spinothalamic system**, use three neurons to convey sensory information from peripheral sensory receptors to conscious levels of cerebral cortex.
Spinothalamic system: Carries pain, temperature, and crude touch sensations from the extremities and trunk.

**Sensory Processing**

Sensory Processing allows us to take in and make sense of many different kinds of sensations coming into the brain through different sensory receptors and channels at the same time. Our ability to respond and function is dependent upon adequate and accurate sensory processing and help us to plan and execute adaptive responses to different challenges in order to learn and function in daily life.

The sensations ultimately are responsible for much of how we learn to function. They are not often thought about consciously and are taken for granted. These sensations produce automatic responses and included vestibular, proprioceptive and tactile sensations.
The MSE environment alone brings about the relaxation process without any conscious effort by the individual; “experiencing” it is sufficient. This makes it a most powerful treatment modality for severely disabled individuals and a first step in treating Sensory Defensiveness.
Many individuals with disabilities are attempting to “self regulate” through their overt behaviors to get “enough” sensory input or eliminate sensory input.
MSE and Brain Arousal

The MSE experience manipulates the brain chemistry through the senses to set the tone for motivation and functional attention.

It lowers the stress chemistry and increases the relaxation chemistry.

The key is finding the combination of sensory input that allows the individual to take control once the balance has been achieved.

This balance allows “arousal, self-regulation”, “motivation, “organization”, and “integration” to take place for the individual.

Self-regulation is the ability to control one’s activity level and state of alertness as well as control one’s emotional, mental or physical responses to sensations; the concept of self-organization.

THE OPTIMAL LEVEL OF AROUSAL IS UNIQUE TO EACH INDIVIDUAL. A “SENSORY DIET” IS OUR ATTEMPT TO MODIFY STRESSORS AND CONTROL AROUSAL LEVELS.

MSE - An Outline

Based on the literature and current research a MSE should be:

Artificially created supported by the natural environment

Devoted to stimulate all the senses,

Safe, comfortable, and predictable,

Designed to empower by providing self-choice,

Demand-free and choice driven activity – consumer controlled,

Passive and interactive

Provided by trained facilitators

Providing passive and interactive features to change brain arousal level and motivation

MSE are Artificially Created and Supported by The Natural Environment

The Limitations of an individual impede their ability to interact with a natural environment in a meaningful way.

An engineered environment of MSE:

Helps make interactions meaningful.

Offers more stimuli than the natural environment.

After exposure to MSE a child’s natural environment becomes less chaotic as he or she learns how to control sensory input.

MSE are devoted to stimulating ALL the senses by:

Adequate multi sensory stimulation of all the senses

The senses are heightened by sufficient frequency, intensity and duration of stimulation and can change brain arousal and motivation.

Intense periods of sensory stimulation that uses repeated movements, sound, touch, and visual exercises helps slowly create new neural pathways.

Multimodal stimulation (stimulation of three or more senses) has more dramatic results than unimodal stimulation.
MSE should always be safe, comfortable and predictable

- Produce an atmosphere of trust.
- Personal space must be honored.
- A user friendly environment that is constant and predictable for the individual is required to facilitate learning and development.
- The MSE must be a dedicated space that remains constant and consistent.
- All elements of physical comfort must be anticipated. Control of the temperature, lighting, noise level, seating options and number of people in the room must be controlled for and preset for the individual.

Designed to empower by providing self-choice

- The individual's choices are honored and respected.
- If they wish to leave, after any period of time, they can.
- If they wish to explore and stay with one piece of equipment, they can. Turning on another piece of equipment after 15 or 20 minutes may encourage further exploration of the environment but this should not be forced by the facilitator. Repeated visits to the MSE may encourage the individual to be more confident and try new experiences. The session is always lead by the individual.
- By providing a demand free, self-choice environment an individual is empowered and his/her self determination enhanced. Self-determination is critical in predicting various performance and satisfaction outcomes and is viewed as a fundamental human right. It also contributes to educational and work goals by increasing self-sufficiency, autonomy, and valued life outcomes.
- The Facilitator waits for the individual to initiate conversation. This is a demand free, self choice activity. There should be NO demands made by asking questions. Facilitators should NOT be chatting in the room, the entire focus of the activity is on the individual.
- Carers, Teachers, Therapists or Family members will complete a client profile for each individual using the room. This will help facilitators to ensure the users safety as well as providing the optimum sensory experience. They will also have an understanding of the user’s sensory interests and know how to introduce stimuli to change brain arousal and motivation.

Techniques to change brain arousal and motivation

Three premises to brain arousal and the well-being central to quality of life is cognition and brain activity and emotional function;

- The central nervous system arousal is fundamental to all cognition, brain activity, and emotional function.
- The core to increasing one’s brain arousal is sensory stimulation.
- Brain arousal is higher in those who are (a) more alert to multi sensory stimuli, (b) more motor active, and (c) more reactive emotionally. Arousal is a dynamic changing process related to direct and indirect responses to internal and external stimuli.
- For a human to have brain arousal, there must be some change in the environment. If there is change, there is usually some uncertainty about the new state of the environment.
- Brain arousal increases with intensity, complexity, novelty, unexpectedness, inconsistency, infrequency, changing environments or the unusual.
- Brain arousal can be decreased with constancy, repetition, familiarity, and neutrality.

The optimal level of arousal is unique to each individual and is based on their sensory needs and interests.
Types of MSE

WHITE ROOM
BLACK LIGHT
SENSORY GARDEN
SENSORY POOL

MSE - White Rooms (Special Haven is a white room)

White Rooms are the most versatile environment and are multifunctional in design that uses light and sound and is accompanied with white floor, ceilings, walls and furniture to form a giant 3D screen on which visual effects can be projected by a wheel effects projectors or rotating mirror ball to create an recreational, educational environment that can help relax, calm and stimulate individuals.

MSE - Black Rooms

Black Room also uses light and sound, the main area of difference is the furniture, ceilings, floors and walls are black where images can be presented with maximum definition and minimum visual distraction. The principal use of the room is for visual stimulation, both ophthalmic and cortical. The black helps with particular visual problems; brightly colored items against a black surface are easier to identify because the black doesn’t reflect the light. Ultra Violet light is used extensively within a Black Room along with UV reactive equipment.

Sensory Garden

Is a living outdoor garden. The wonderful array of colors, sounds and aromas together with the tactile experience of textures helps to develop life skills taking into account things such as access for wheel chairs, height of planters and sunshades. All the small details are essential to a perfect sensory garden.

Sensory Pool

Individuals benefit from a program that combines both the sensory aspects and the medicinal benefits of a heated therapy pool in an integrated social environment. Introducing all the imagery and color of a Multisensory area gives a total unique, exciting and stimulating experience. A multi-sensory hydrotherapy pool with therapeutic temperatures of 92-96 degrees provides a sound and light system which blend quality sound, intelligent lighting, effects projectors and sound-to-light color floods into a controlled environment.

Equipment in The Special Haven MSE

- **Light effects** produced by projectors and effect wheels that disburse light patterns throughout the room, bubble columns, spotlights, star panels, fiber optics, UV lights, mirror balls, and sound activated string light and fan light.
- **Sound effects**, including pleasant music, nature sounds, interactive sound and music boards. Select rhythmic music with a variety of tone, pitch, rhythm, and spacing.
- **Tactile experiences** of changing textures on an interactive tactile wall panel or gentle vibrations and massage, fans that generate wind. Soft comfortable items to touch or hug such as a tactile column made with fur, feathers, etc.
- **Soft items**, such as thick floor mats, pillows, vibrating chairs, waterbeds, and beanbags.
- **Sensory activities**, such as blowing bubbles, drums, musical instruments, finger painting, and using play dough.
- **Tasting experiences** of different flavored drinks and foods.
- **Motion stimulation**, including soft therapy rockers, platform swings, and ball pools. Ball pools provide comfortable pressure. The effect projector can also be used to stimulate the vestibular system.
- **Aroma diffusers** should be added with caution. Since the sense of smell goes directly to the limbic brain and is a primitive sense, it is a very powerful stimulus and can evoke very powerful responses. So unless the facilitator is sure of the likes and dislikes of the user, they should refrain from using aroma.
The Special Haven MSE con’t

The Special Haven room has a central control center near the entrance where each piece of equipment can be controlled by a switch on the wall. The regular lights in the room should be on a dimmer switch so that transition into the room can take place through control of the intensity of the room’s lights. All equipment elements should be capable of either a passive or interactive mode using switches. Various switches allow the individual to have control over the MSE and establish an interactive approach to MSE.

What are Vibroacoustics?

Vibroacoustics is the process of hearing sound vibrations through the body (Boakes, 1990).

This is accomplished through specially constructed chairs, treatment tables, or beds (some with water) that are equipped with powerful speakers designed to vibrate the body with optimal psychological and physical impact (Pierson, 1996). *At Special Haven our platform, waterbed and ballpit are all vibroacoustic.

The purpose of vibroacoustics is to create tactile-soma integration.

The body holds emotional events in cellular memory.

The use of vibration from 8–180 Hz has the effect of disengaging those resonant patterns that seem to run in loops and fixate themselves in the body (Pierson, 1996).

Vibroacoustics change the bio-electrical signature of the emotional imprint. Pierson (1996) emphasizes the power of bone conduction, others consider skin absorption of sound equally important.

Whole-body acoustic stimulation is based on the skin as a powerful sense organ: Our skin is not just a covering; it is an enormously sensitive organ with hundreds of thousands of receptors for temperature and vibrotactile input.

Every organ of perception develops ontologically and phylogenetically out of skin. In the embryo, skin folds and then forms our eyes and ears. Our skin may contain the latent capacity to perceive light and sound. Stimulating the skin with energy in the right way, you can potentially repolarize the brain and charge it with energy (Patrick Flannigan,).

Benefits of vibroacoustics include pain management, anxiety relief, symptom reduction, physical therapy, and health improvement. Vibroacoustics can also increase quality of life and be used to manage behavior in psychiatric settings, geriatric facilities, child life centers, and palliative care facilities (Boyd-Brewer, Olav Skille)

Individuals who like to be under heavy blankets or enjoy tight squeezes usually get a lot of enjoyment out of the vibroacoustic equipment especially when they combine it with a weighted blanket or lie under the fiber optic lights, giving heightened sensory feedback and sensation.

MSE - Passive vs Active

Passive

Equipment runs automatically, no interactivity. Principle use is for relaxation.

Active

Rooms are interactive where equipment can be activated either by an enabler (facilitator) or by the individual. The interactive area is where vocal or movement sensitive switches enable individuals to consistently and immediately produce effect that is rewarding and meaningful for the individual. The principal use of this area is to promote an understanding of the relationship between cause and effect through the use of switches. Switches are designed to suit the ability of individual children. They include large or small touch pads that can manipulate by toes, feet, figures, hands, arms, or legs or movement of the head. Manipulation may range from gentle touch or movement to squeeze.
Switches - An Interactive Approach

One of the most important components of an MSE is the ability for the user to control their environment. Various switches provide an interactive approach that allows for self-choice, control, and produces a cause-and-effect relationship.

An interactive environment produces a feeling of achievement, enjoyment, control, and a shared experience with the facilitator.

The use of switches allows the individual to control items within his or her environment, enticing the user to reach out and explore.

There are numerous switching (cause) devices that allow individuals with severe/profound and multiple disabilities to turn on and off equipment.

The DST

Select equipment for your MSE that can be interfaced with various switching devices so as to be controlled by both the user and the facilitator.

- DST system works using cause and effects products to create a 'cause & effect' interaction..
- All DST products work wirelessly and at Special Haven can be synced to operate the fiber optics, bubble tubes and the ballpit.
- At Special Haven we are lucky enough to have this state of the art system which includes the magic cube, a voice activator and the box of interactive buttons with several modes which we will learn about in our hands on training.

**LINKING THE EFFECTS (bubble tubes, ballpit, fiber optics)**

**WITH THE CAUSE - DST buttons**

Simply Press and hold the red button on the external control connected to the effect element while pressing any button on the DST button unit. The effect element (i.e. bubble tube, ballpit or fiber optic) will now respond to the buttons.

A point to note is that if you press and hold the program button for more than about 6 secs, the unit will go into automatic passive mode.

**LINKING THE EFFECTS (bubble tubes, ballpit, fiber optics)**

**WITH THE CAUSE - DST cube**

Simply Press and hold the red button on the external control connected to the effect element while turning over the cube to any color. The effect element (i.e. bubble tube, ballpit or fiber optic) will now respond to the magic cube.

**LINKING THE EFFECTS (bubble tubes, ballpit, fiber optics)**

**WITH THE CAUSE - DST cube**

Press the power button on the voice activator box then press and hold the red button on the external control connected to the effect element. At the same time talking, making a noise, breathing into or tapping the voice activator box. The effect element (i.e. bubble tube, ballpit or fiber optic) will now respond to the voice activator. If not used for 5 minutes the voice activator will turn off. If you put the voice activator box on top of the white cupboard while the stereo is playing the effect it is linked to will work in time to the music.
Recording A Message on the DST Cube

To record your own message on the speaker follow these simple steps:

1. Place the cube on the side you wish to record your message or sounds (i.e. to record on the green side, place the cube green side up).
2. The message corresponding to this side will be heard from the speakers. (On the bottom shelf in the white storage cabinet)
3. Remove both speakers from the cabinet and place on the floor (they are plugged in at the back of the cabinet) next to the DST cube (the speaking cube switch on the main panel must be turned on. Press and hold the RED Record button on the top of the speaker unit while directing your new message, or sound into the front of the speaker. Recording starts straight away.
4. Note – this will erase the message previously recorded to this side
5. Release the record button. The Message you have just recorded will be heard from the speaker, and will be heard each time this side is selected on the cube.
6. Please re-record the colors on the right sides before leaving the room.
# Equipment Purpose

<table>
<thead>
<tr>
<th>Equipment for an MSE</th>
<th>Primary Purpose</th>
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<tbody>
<tr>
<td>Visual, Vestibular Effects</td>
<td>Effect projector and accessories. Mounted so wheel can easily be changed.</td>
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<tr>
<td></td>
<td>Produces a variety of moving images, abstracts, and patterns to changes brain arousal levels/behavior. Lens and accessories can enhance the images. Promotes visual awareness, tracking skills, spatial relationships, and impacts vestibular stimulation.</td>
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<tr>
<td></td>
<td>Bubble Tubes/Columns</td>
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<tr>
<td></td>
<td>Acrylic tubes filled with distilled water. An air pump provides rising patterns of air bubbles, pleasant sounds, and soothing vibration. Various colors are illuminated through tube. The bubble tubes are the room's focal point.</td>
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<tr>
<td>Visual, tactile Effects</td>
<td>Fiber optics</td>
</tr>
<tr>
<td></td>
<td>Bundle of fiber optic strands that glow with a changing color light display. Strands are sheathed in plastic for durability, flexibility, and safety. Uses tactile and visual sensation and adds to uniqueness for maintaining arousal level. Promotes visual awareness, visual and tactile stimulation, visual fixation, color identification. Can provide deep muscle relaxation, social interactions. Head/neck muscle control and strengthening, encouraging the individual to look up and down, counting, artistic expression.</td>
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<td>Visual and vestibular Motorized mirror ball</td>
<td>Used to put intense visual/vestibular stimuli into the nervous system for matching arousal level for change.</td>
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<tr>
<td>Tactile Effects</td>
<td>Vibroacoustic platform or chair</td>
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<tr>
<td></td>
<td>Soft Items – floor mats</td>
</tr>
<tr>
<td></td>
<td>Pillows, bean bags, vibroacoustic platforms</td>
</tr>
<tr>
<td>Sound Effects (Music)</td>
<td>Stereo unit in white cabinet. Turn on at main panel to operate.</td>
</tr>
<tr>
<td>Sensory Activities</td>
<td>Blowing bubbles, finger painting, play dough</td>
</tr>
</tbody>
</table>
The Facilitator

Needs to:
be sensitive and caring with a non-directive approach in which the atmosphere of safety and security is encouraged. The enabler and client will share a common, positive emotional experience during the activity. There is no formal focus upon therapeutic outcome – rather the focus is to assist users to gain maximum pleasure from the activity that they and the enabler are involved in.” Louise Haggar

Before you begin the Multi Sensory Experience:
If you are a carer, teacher or therapist please:
- Review client profile / sensory diet
- Communicate with staff re: mood, sensory interests and current health etc

Sensory Diet:
Sensory Diet is the multi-sensory experiences that one prefers to seek on a daily basis to satisfy one’s need for sensory stimulation and helps produce self-regulation. A “SENSORY DIET” IS OUR ATTEMPT TO MODIFY STRESSORS AND CONTROL AROUSAL LEVELS AND IT IS UNIQUE TO EACH OF US.

The difference between a Sensory Diet and Personal Preferences:
- A Sensory Diet is an unconscious process
- Personal Preferences is a cognitive process
- Combined They Serve to Establish Motivation

Identifying someone’s Sensory Diet
- Observe the individual in their environment. What seems to make the happy, what do they enjoy? To determine the individual's choice of preferred equipment motivator.
- Ask questions of the person or family member
- What is their favorite food, dessert, fruit etc.
- What smells do they like. Look to places/vacations for hints. Did they enjoy the smell of the ocean or pine trees?

Presenting the MSE experience requires:
- Present the multi-sensory equipment in the same consistent order and sequence of turning it on. Developing a individual protocol.
- MSE Room must be a match with the individual's sensory diet and energy level.
- Goal: to establish feeling good about one’s self.
- As the individual experiences pleasure/fun, over time an emotional repertoire will result and the person is ready for generalizing relationship building with others, first in the MSE and then outside.

Developing the individualized Protocol
- Prioritize the order of turning the equipment on by what the individual likes most. (Match the Sensory Diet of the Individual with the equipment of choice). For example if they approach a fiber optics and seem to enjoy the visual and tactile component turn this on first.
- Then develop a sequencing for turning on the other pieces of equipment based on the interest, needs, and likes of the user.
How can Music Enhance the experience?

If the individual is able to express their preferences then music of their choice can be beneficial.

Do not use music with lyrics, this will cause the individual to focus on the lyrics and not the room.

When the individual first visits the room choose music that imitates their energy level. For example if they are very high energy then choose music to reflect that for 10 minutes, then choose a medium energy level music for 10-15 minutes and finally relaxation music to help calm the individual.

If the individual is very withdrawn when entering the room start with low energy music, then after 10-15 minutes change to medium energy music and end on high energy for the remainder of the session.

Be mindful of noise level which can be a huge issue with some of the individuals using the room. Starting the music very softly and gradually increasing the volume a little over time can be beneficial.

If the individual has a good energy level, medium level music is adviseable.

Pairing music with different projector effects wheel can change the feel of the room dramatically.

Aromas

Be very careful when introducing aromas. Some individuals may have heightened sensitivity to smells while others may trigger seizures or aggressive behaviors with certain smells.

At Special Haven we are very aware that olfactory stimulation can be every bit as important as the other senses and so have a discrete smelling box with many different smells to experience.
Protocol for the MSE

Prior to starting the MSE experience with someone have the regular room lights on and the dimmer spot light turned on all the way. No equipment is on when they enter.

Bring the person into the room. Remember, at any time an individual's wish to leave and terminate the experience must be honored and respected immediately.

The chosen music is playing when they enter the room.

Turn on equipment the individual is first drawn to, if they stand at the door or in the middle of the room and do not explore after 5 minutes turn on the Bubble tubes. WAIT to let them enjoy the equipment and become aclimatized.

After a few minutes dim the regular room lights down and wait. As the individual becomes more comfortable in the room dim the lights a little more while turning on lights like fiber optics and bubble tubes etc so you are not in the dark. If tolerated the room lights can be turned off eventually.

Turn on another piece of equipment based on the individual preferences (for example: maybe the second bubble tube or the fiber optics). If after 15 minutes the individual does not show any interest in investigating maybe turn on another piece of equipment or start playing with it yourself. DO NOT make the individual move around the room, it must be lead by them. If they only play with one piece of equipment all session that is fine. There is no right or wrong way to use the room it is definitely individual.

Once the lights are dimmed at least a little turn on the projector. with a liquid six inch effects wheel. (start with the multi-colored wheel) WAIT,... Do not rush the experience!.... WAITING for THEIR RESPONSE AND ACTION....IS KEY!

If the individual protests when equipment is turned on, turn it off, the room has to feel comfortable for them

The next move or not, is up to the individual!

This will all depend on the person's sensory interests, their arousal level, and the objectives of whether to increase or decrease arousal.

Using one DST switch (mega buttons or cube), demonstrate the function of turning the tube on and off a few times, or changing color. Put down the switch near the user and fade back out of sight. WAIT.

About fifteen into a session and you should start to observe the individual begin to relax.

If the individual has remained in a comfortable position and appears relaxed, just let the gentle and unobtrusive atmosphere prevail. There is no need to rush things.

This maybe all that is required for equipment in the first session depending on the individual's level of arousal or relaxation level. You may not achieve relaxation for a number of sessions until the environment is perceived as safe and it is considered predictable by the individual.

At about twenty five minutes into a session you want to reverse your order of turning equipment off slowly. The regular room lights should be the last to be turned on at the end of a thirty minute session. Do not spend more than one hour in the MSE or it can be counter productive. If you plan on an hour session start your shut down sequence at around 55 minutes into the session.
Exploration of The MSE

Depending on the individuals response you may:

- Demonstrate turning on the equipment with the switch. Do not verbalize what you are doing, or make requests of the individual. Just role model the behavior and move back.
- If the individual speaks to you, and makes a request, honor it immediately. This has been positive engagement. Unless of course, they come over and hit you! Session Ends, slowly turn off all equipment.
- If the session ended as described: The next time when the equipment goes off, you intervene first and help the individual appropriately request the equipment be turned on again if needed. (Utilizing the appropriate skill level of the individual.).
- You are beginning to develop a relationship with the person.
- Next utilize the equipment to reinforce positive behaviors and interactions.

The Impact of Autism

Autism is one of the biggest groups of individuals who benefit from MSE and so we will discuss here the impact of Special Haven particularly on this group. However, children and adults with ALL disabilities, particularly those with sensory impairments such as vision or hearing loss or those who are unable to touch or feel surfaces, those who are sensory seeking or have sensory aversions can benefit greatly.

Common sensory issues for individuals with Autism

- Odd responses to sensory stimuli
- Oversensitivity to sounds
- Oversensitivity to being touched
- Exaggerated reactions to lights or odors
- High threshold for pain

Possible goals for those with Autism in The MSE

- Improve social interaction
- Improve communication.
- Decrease the cycle of repetitive & stereotyped patterns of behavior.
- Decrease aggressive and other challenging behaviors.
- Decrease agitated behavior.
- Decrease the need for self stimulatory behaviors.
- Increase awareness and interaction with environment.