

The room has a) Mirror Ball and Motor or b) Fire ball c) Projector d) Bubble tube with changing colors and you feel vibration when you touch. e) Fiber optic lights. f) Bean bag. g) Soft mat. h) Coarse and soft toys. (360 Degree Rotating LED Lamp, Auto Strobe, Magic Ball RGB Effect Light, LED Revolving Bulb)



A good sensory room will have controllable light sources and light therapy. Most importantly, make sure there are absolutely no fluorescent lights (they are bothersome even to people without sensory processing disorders). Color cubes, fiber optic light sources, rope lights, and/or low wattage pastel colored light bulbs are all good ideas.

OTHER SENSORY STIMULATION METHODS

TACTILE MAT



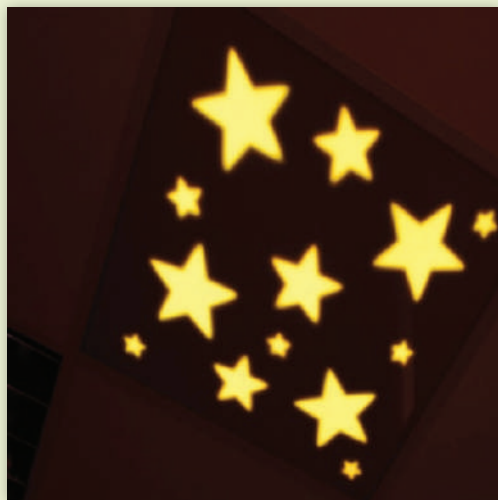
SENSORY WALL PANELS

Built to the highest standard, Experian's sensory wall panels offer a multitude of colors and patterns ideal for creating either a calming or interactive environment while developing a number of life skills. Effective additions to any room, these sensory wall panels produce mesmerizing and striking effects that enhances the sensory experience. It comprises a number of textures which are soft, hard, smooth, rough, cool, and warm and various material including metal, plastic, wood, carpet, mirror and more.

The meandering artistic shape has been designed to encourage a person to touch and follow it around the disc .

The Tactile Disc

Standard is engaging and stimulating is a great way to have fun or assess a person's likes and dislikes.

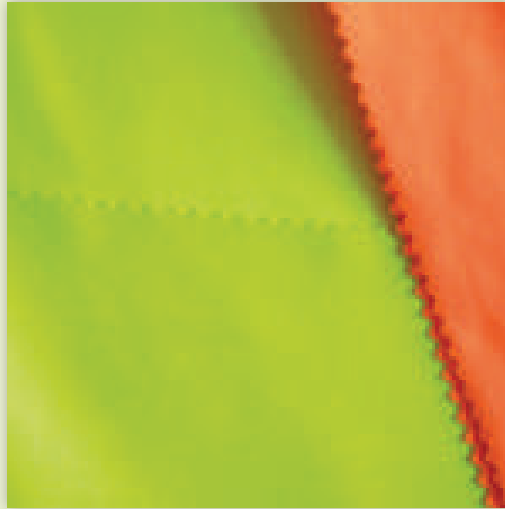


Sensory ceiling stars

CURTAINS

Curtains are useful for quickly creating a sensory environment in any room without the need for expensive partitions or extra walls. They can be easily pushed back out of the way when not needed, giving added versatility.

Black is great for creating a dark space for UV sensory work, while cream gives an ideal surface onto which to project images.



SOME ILLUSTRATIVE PICTURES





ENERGY ROOM

Where you can experience a sense of weightlessness and total relaxation in the leaf chair while watching the stars. Absorb the sights and sounds of the ocean in this watery wonderland with bubble tubes, fibre optic fountain and a large ball pool to dive into.

Great for those with sensory impairments. Explore the environment through touch. A stimulating experience to engage the senses and aid concentration.



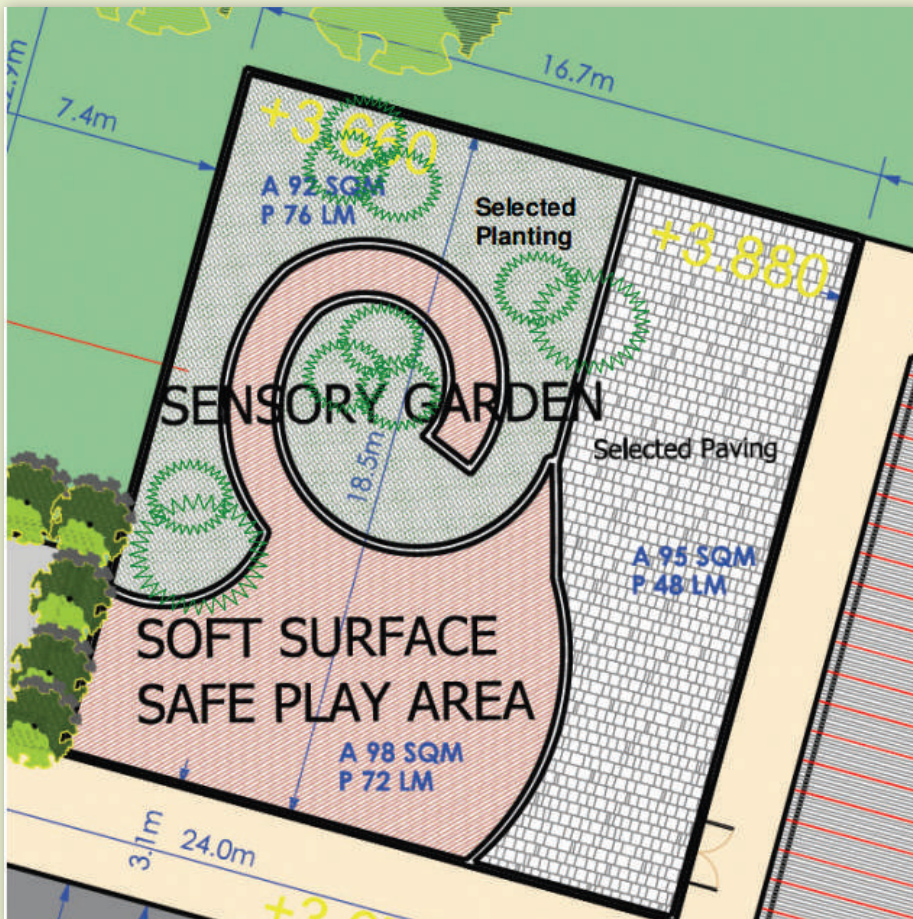
GENERAL SUGGESTIONS

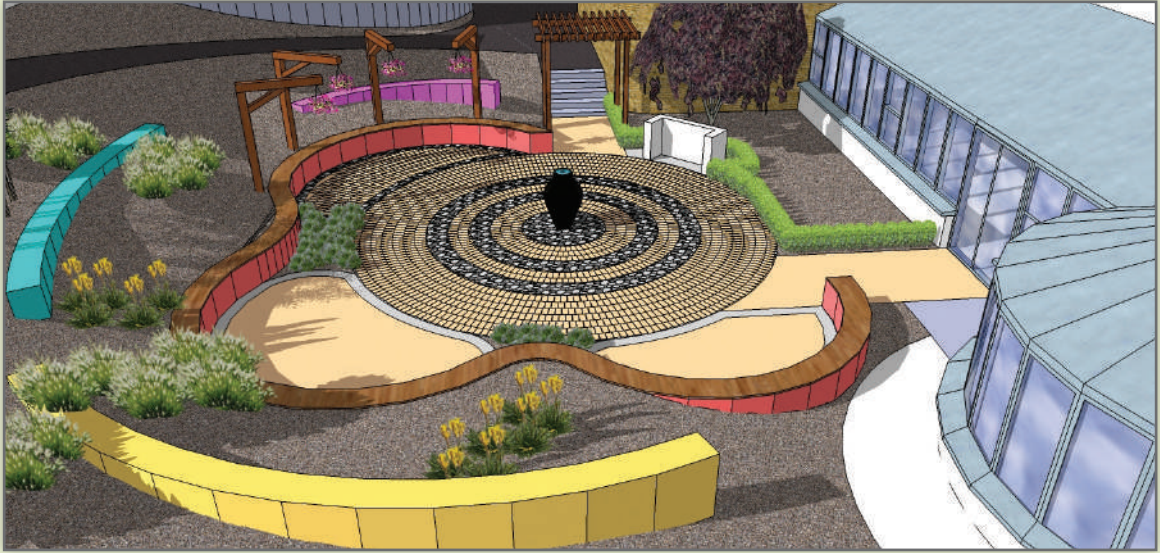
- Be sure to include as many sensory experiences and “stations” as possible.
- Work on 1-2 senses at a time; for example, soothing music while feeling different textures, or deep pressure input while using light/visual therapy and stimuli.
- Use the room as “therapy”, i.e. 5-7 days a week, 1-2 times per day, depending on the individual’s needs.
- Encourage all senses to be explored and used.
- Pay attention to the child’s reaction to various stimuli. Give him more of what he is seeking, the best input to calm or stimulate.
- **DO NOT** force anything.
- Be creative in activities and ways in which the sensory stimuli is introduced.
- Watch for signs of over stimulation/over arousal/extreme fears.
- Precautions should be taken that the toys/instruments are washable, safe and replaced timely if damaged.
- Care should be taken not to allow unsafe, sharp, pointed, small lead painted toys/objects in close proximity to children.

SENSORY GARDEN (DESIRABLE)

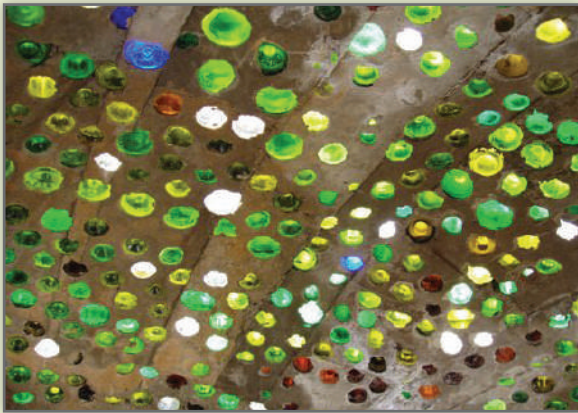
- A sensory garden should be incorporated into the secure play area, where the hospital site area permits. This should be prepared and ready for planting. The DEIC team will be responsible for the selection, provision and installation of appropriate planting. The sensory garden must be fully wheelchair accessible.
- A sensory garden stimulates the senses. Hard and soft landscaping – fountains, raised wheelchair accessible planted beds, pergolas (climb-proof), wind chimes, foot chimes, bird tables, etc., can be used in a variety of ways to provide experiences involving seeing, smelling, hearing, and touching. Children should be encouraged to interact with the plants, touching and smelling them. Space to sit down, picnic, listen to sounds, etc. should be considered within the layout.
- Provision should be made for a water supply and electrical services to accommodate a water feature, should this be required.
- For hyper sensitive children, the portion of sensory garden which has soft landscaping with accessible planted beds and soft sounds.
- For hypo sensitive children, hard landscaping, swings, pergolas (climb proof), sand pits, etc.

A SENSORY GARDEN EXAMPLE









ANNEXURES

ANNEXURE I

THERAPY EQUIPMENTS AND ADAPTIVE SEATS:

1. Therapy ball- 1Big (65cm),
1small (45cm)



2. Therapy mats- 6ft x3ft
Quantity - 6 mats



3. Bolster-
 - a) 2ft long, diameter- 8 inch
 - b) 2ft long, diameter- 10 inchQuantity - 2bolsters



A child is encouraged to roll into prone by rolling the bolster backwards

4. Small roll- 13 inch long,
Diameter-3 inch
Quantity – 2 rolls

The child is placed in prone
over a roll

A roll is placed under the
head to inhibit extensor
Tone while the mother is
changing nappy



5. Prone Wedge- Big-
Height-14 inch; Length- 31
inch,
Breadth- 17 inches
Small- Height-10 inch;
Length- 26 inch
Quantity -2 wedges,
1 big and 1 small

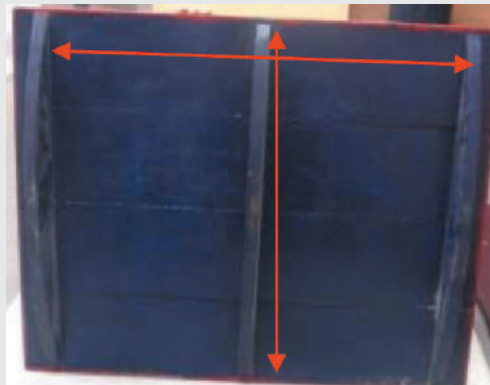
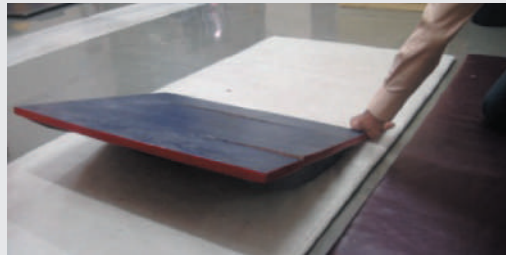




The mother encourages her child to lift her head and trunk by shaking a rattle when the child is placed prone on a wedge. The child is lifting her head and weight bearing through her arms on a bolster

6. Balance Board- Length- 29.5 inch, Breadth- 23 inch, Height- 2.5 inch

Quantity -2
Underside of the Balance board



7. Trampoline
Quantity -1



8. Kaye-Walker
Quantity -1



| Size/ref/code | | W1/2 | W1 | W2 |
|----------------------------------|-----------------|----------|----------|-----------|
| Colour | | | | |
| Height of Walker | Standard Wheels | 37.46 | 41.55 | 48.64 |
| | Activity Wheels | N/A | N/A | N/A |
| Distance between hand grips (cm) | | 34 | 34 | 34 |
| Frame Width (cm) | | 58-60 | 60-62 | 58-60 |
| Frame Length (cm) | | 52-59 | 56-62 | 69-83 |
| User Height (cm) | | up to 95 | 91 - 122 | 107 - 137 |
| Max. user weight (kg) | | 27 | 27 | 39 |
| Frame weight (kg) | 3 | 3.3 | 3.3 | |

9. Bolster Swing-
Quantity -1 big - 300mm di-
ameter and 1.5 meter long
1 small-300mm diameter
and 1.2 meter long



10. Toys like balls, rings, squeaky toys for stimulation



Puja bell



Rattle



Rattle



Squeaky toy



Squeaky toy



Soft toy



For tactile stimulation



Brush for tactile stimulation



Toy for tactile stimulation



Plasticin



Peg board



Peg board



Bench



Bolster swing



Small bolster swing



Ball Pool

11. Modified chairs (wooden with cushion covered with Rexene)- Custom made

Quantity-1



Child sits in a modified chair with a cut-out tray in front. The chair has castors for easy transportation

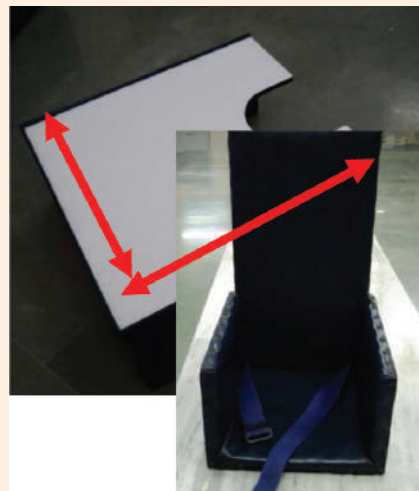
12. Splints (Ankle Foot Orthosis) [For demonstration]



13. Wooden Benches with cushion and Rexene cover (3ft long and 4, 6, and 8 inches height) Quantity-3 (one each)



14. Cut-out floor table (2ftx2ft) Quantity - 2



15. Floor seat (Pelvic strap):
Quantity -2



Child sits in a floor seat with a cut-out floor table in front

UTILITIES OF THERAPY EQUIPMENT

Therapy ball – A useful tool to facilitate movements of head and trunk against gravity. It provides vestibular stimulation. Helps to improve balance reactions. Rolling can be facilitated using righting reactions. Helps to increase tone upto an optimal level for a child with low tone. Rhythmic movements on the ball help to reduce hypertonia and thus prepare a child for more normal patterns of movements.

Therapy mats – Parents and professionals sit on the mats. Therapy is done on the mat. As the mats are placed on the floor, the child feels much secured and dispel fear of falling down from a height in the child and thus rule out any injury due to fall. The mats are easy to clean.

Bolster – Used for proprioceptive, vestibular input. Various movements can be facilitated on a bolster such as head and trunk extension, rotation of trunk in sitting and rolling over. Co-contraction of shoulder girdle muscles can be facilitated through weight bearing through arms in a prone position and gentle rocking movements forward to back helps to facilitate the child's weight shifting ability through arms. Righting reactions can be improved with slight rolling of the bolster to both sides putting the child in an astride position.

Small roll – Used for babies and infants for positioning and to facilitate head control in prone. When placed under the occiput, it helps to maintain elongation of the back of the neck and reduce extensor tone in infants with ATNR and opisthotonic posture.

Prone Wedge – Used for positioning in prone, facilitates head control as the effect of gravity is much eliminated.

Balance Board – Improves balance in sitting or in a standing position. Instability invokes equilibrium reactions and thus improves stability in standing and walking.

Trampoline – Used for proprioceptive and vestibular stimulation especially for children with sensory integration disorder.

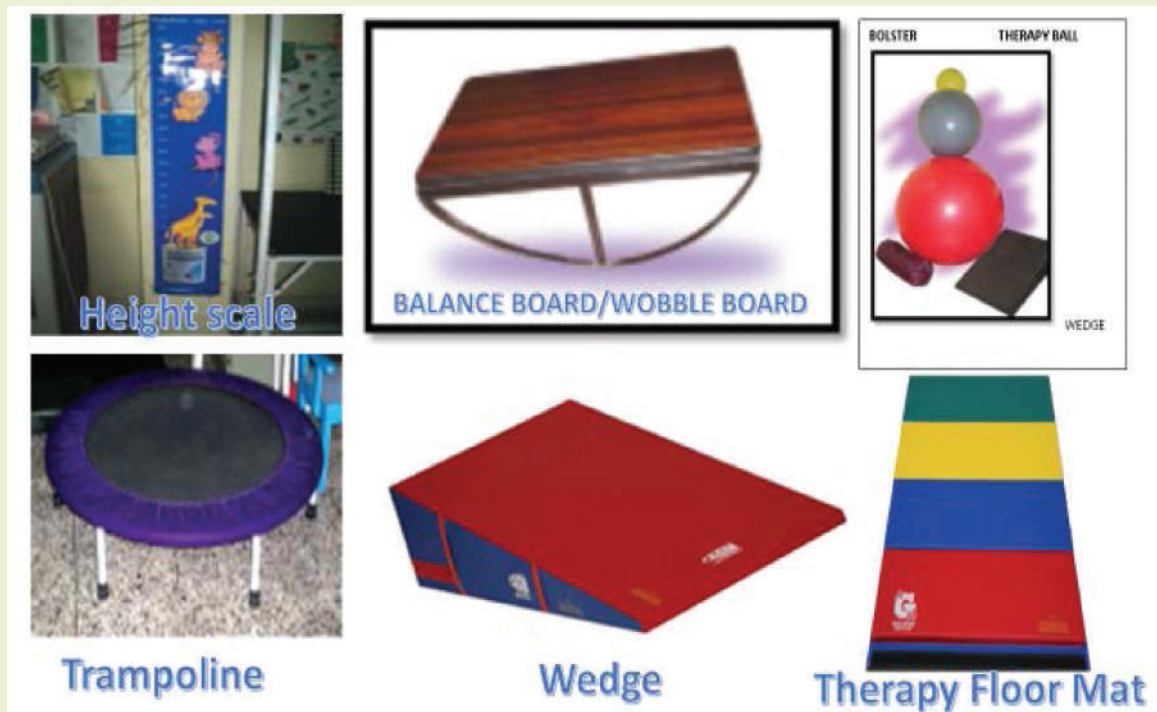
Kaye-Walkers - A walking aid that facilitates extension of trunk, hips, and knees for children with spastic Diplegia.

Modified chairs – Seating children with Cerebral palsy, modified according to the needs of the child.

Splints - Used to keep the joints in neutral positions and provide stability.

Wooden Benches – Used as therapy tool to facilitate standing and cruising. Cruising is particularly important to reduce adductor spasticity and simultaneously facilitates extension and external rotation of hips and extension of knees when the child shifts her body weight sideways. A child can stand in a modified plantigrade position (weight bearing on extended arms while standing on her feet) and gentle rocking forward and backward facilitates weight bearing through both arms and legs. Such rocking movements also helps in improving balance reactions in preparation of walking with walking aids like elbow crutches or rollator or a Kaye-walker.

Bolster Swings – For vestibular stimulation, used for children with sensory integration disorder.



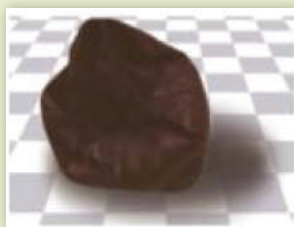
Practice Beam



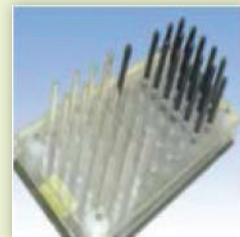
Added Balance Board



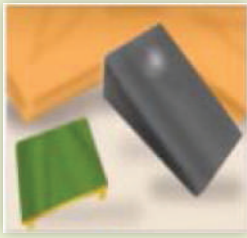
Modified Chairs



Bean Bag



Peg Board



Wedges



Activity Table



Modified Wheel Chair



Cp Walker



Stacking Rings



Trampoline



Balancing Toy



Step Stander



Ball Pool



Slider

Resources to Support Sensory Development



Fig 1: Sensory toys, to squeeze and feel.



Fig 3: Sensory feely boxes, sand trays, yellow sensory box.



Fig 2: Head Phones

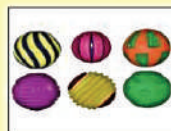


Fig 4: Tactile mats and balls.

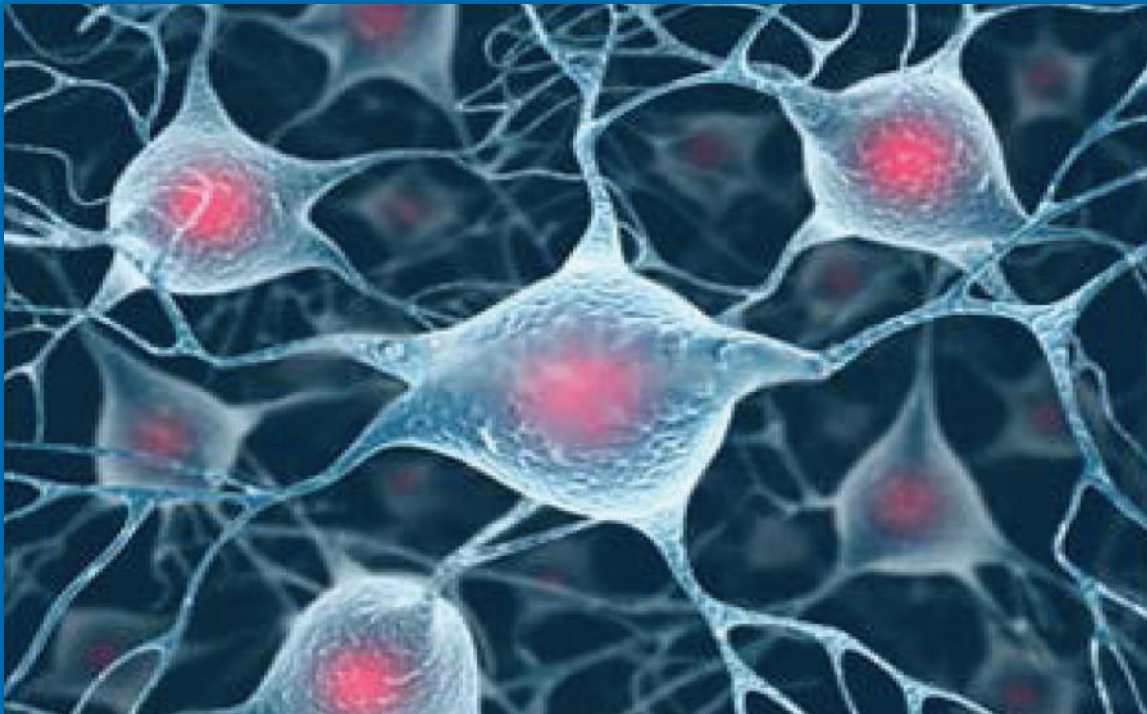


Fig 5: Rocking toy, trampette and play tent.

EARLY BRAIN DEVELOPMENT

There are some important concepts that help us understand early brain development:

- ❖ *At birth, newborns start with very similar brains and brain structures.*
- ❖ *Beginning in the last trimester of the prenatal period, brain pathways are formed by developing new connections. This growth increases after birth and follows a predictable sequence (McCain, Mustard & Shanker, 2007; National Scientific Council on the Developing Child, 2007)*
- ❖ *There are “sensitive periods” during child’s development, when the wiring of the brain for specific abilities is established (Couperus & Nelson, 2006)*
- ❖ *Providing responsive, nurturing and stimulating experiences establish the wiring of the brain connections. Children who are well supported and nurtured physically, emotionally, socially and intellectually will develop a multitude of neural connections that will serve them well throughout their life course.*
- ❖ *A child’s interest and curiosity are the motivators that create new connections to acquire new skills. Each new skill builds on a skill already learned. (Blair & Diamond, 2008; Miller & Keating, 1999; Posner & Rothbart, 2006; Shanker, 2008). The child’s environment can support and enhance his interest and curiosity.*
- ❖ *Early brain development establishes a child’s social competence, cognitive skills, emotional well-being, language, literacy skills, and physical abilities and is a marker for well-being in school and life resiliency (Blair, 2002; Posner & Rothbart, 2006; Shanker & Greenspan, 2009).*



“Early child development sets the foundation for lifelong learning, behaviour and health. The experiences children have in early childhood shape the brain and child’s capacity to learn, to get along with others, and to respond to daily stresses and challenges” (Dunst 1996)

“The introduction of planned programming deliberately timed and arranged in order to alter the anticipated or projected course of development”
(Seigal 1972)

“It’s not a drug, it’s not a vaccine, and it’s not a device. It is a group of therapists working together, solving problems and enhancing capabilities”

Adaptation from Richard Horton, Lancet editor

“Medical services and professionals rendering Early Intervention services are the best entry point for such activity because of general acceptance of medical personnel as first line of intervention. Social services and educational services should then work in tandem for reinforcing motivation and sustenance of these benefits.

(Dr Anand Pandit 2013)

“Early intervention is a term which broadly refers to a wide range of experiences and supports provided to children, parents and families during the pregnancy, infancy and early childhood period of development” (Dunst 1996)



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