

Sensory experiences



Providing areas in your setting dedicated to the enrichment of the senses can have a profound effect on children's learning and development, says **Judit Horvath...**

In theory

Research shows how the brain's neural circuitry develops. The 'wiring' of the brain - i.e. 100 billion neurons connected with one another in intricate ways that coordinate the functions underlying human behaviour - develops as each neuron links up with thousands of others. Incredibly, the total length of this 'wiring' between neurons is believed to be around 62,000 miles (see Coveney & Highfield's *Frontiers of complexity: The search for order in a chaotic world*). The contemporary view is that while the main circuits, for example, for breathing, control of heartbeat, reflexes, may be pre-wired in humans, the brain also contains trillions of finer 'unprogrammed' connections. The development of the unprogrammed connections depends on stimulation from the environment and the experiences in the environment a baby has. It is this stimulation that completes the structure of the brain.

Scientists now believe that to achieve the precision of the mature brain, stimulation in the form of movement and sensory

experiences during the early developing years is necessary (see, for example, Greenough & Black, ow.ly/rAale) and connections that are not made by activity will eventually disappear. Certain observations show that due to differences in experience, not even identical twins are wired the same, hence the difference in their behaviour later in life. The basis for the importance of sensory experiences was derived from studies that compared brain structures of animals raised in various environmentally normal, deprived, and enriched settings. The enriched settings provided the opportunity to interact with toys, treadmills and obstacle courses. Animals placed in enriched environments had brains that were larger and contained more synaptic connections.

When children are offered objects and toys to look at, listen to, smell, touch or feel on their bodies, they respond in many different ways. Sensory rooms provide environments in which they can experience special sound and visual effects, tactile experiences, vibration, use of aromas and

From the moment a baby is born, and even before birth, she is absorbing the world through her senses - what she sees, hears, touches, smells and tastes.

Adults often fail to realise how important this sensory learning is and continues to be, through toddler-hood and the preschool years.

Babies are born with brains full of neurons. Learning about the world through the senses develops pathways between the neurons, and the more practice of one type of experience a child has, the stronger the pathway becomes. The stronger the pathway, the easier it is for a child to learn more about that part of the world, for her whole life. Pathways that are not used often, however, will eventually disappear.

music in many combinations and variations. The educational activities in a sensory room focus on particular senses such as feel, sight, sound and smell, as well as the more abstract senses of wellbeing, space, time and togetherness. The result is a very special space in which children can completely relax and interact with and control the elements, all creating a positive inner working model for them.

The darkness common in such rooms also acts as a brain stimulator. The eyes work with the brain, muscles and nerves to produce complicated visual images and message; so as the eyes constantly adapt to the changing environment and adjust so that children can easily move around in a nearly dark room with a variety of moving and controlled lights, the connections between the brain, muscles and nerves becomes stronger, also creating new pathways in the process. It enables children with different degrees of ability to change and influence their environment in a positive way.

In practice

Sensory rooms, depending on their intended use - for example, relaxation, focused work, stimulation, control, massage, aromatherapy, therapy, communication, stress release - can vary in appearance, structure and resourcing. At Olympus KeyMed Day Nursery we have two sensory rooms, the Art Expression room and Relaxation room.

The Art Expression room is a small area equipped with a cupboard, running water, white walls and interactive sensory floor tiles, and fitted with ceiling UV blacklights (for safety purposes). Within this room children paint, draw and construct. Their materials include white recycled paper, fluorescent

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paint, highlighter pens, white fabric and glue, and children are also allowed to paint or draw on the wall (the wall is repainted white periodically). This room fosters creativity, provides children with a variety of ways to express themselves, and is suitable for all early years age groups.

The Relaxation room is a more traditional sensory setting with laser and overhead projectors; a bubble tube, touch-sensitive light sphere, light panel and aroma diffuser; a CD player and relaxation music; a tactile walkway, which consists of individual panels covered with different textures; and torches, mirrors, fibre optics and squidgy balls. The children are able to freely explore, watching moving lights and bubbles, which develops hand-eye coordination; the effects enhance their colour and shape recognition, the soft play area increases their sense of safety and confidence, and they learn about cause and effect when exploring textures. The calming environment of this room helps the children to bond and encourages positive interaction, while the relaxation promotes soothing, emotional health and holistic development.

Sensory rooms and the EYFS

PERSONAL, SOCIAL AND EMOTIONAL DEVELOPMENT

Sensory-rich places strengthen personal, social and emotional development. When a child becomes deeply engrossed in play, adults can gain an insight into their personality, interests and schemas. As well as supporting emotional wellbeing, the engaging qualities of sensory-rich places provide a safe frame for problem solving, self-reflection and testing of ideas. Our Art Expression room allows children to be in complete control of their actions and experiences, aiding their confidence, decision-making skills and cooperation, and motivating their engagement in learning.

COMMUNICATION AND LANGUAGE

Engagement in real experiences with objects that have undefined uses provides children with opportunities to discover the world around them. A wide variety of language will be instigated when children are focusing intently.

PHYSICAL DEVELOPMENT

Open-ended resources, different textures and unusual materials that can be manipulated easily, even including light, warmth and fragrances, are great for developing fine and gross motor skills and building body strength. When children are

engaged, their learning becomes full-bodied. In the sensory room children have many opportunities for the coordination and performing of small muscle movements, which aids them in becoming experts of important tasks like tying shoes, holding a pencil or turning the pages of a book. Gross motor skills are practised through exploring surfaces, lifting, throwing and rolling.

LITERACY

Sensory play encourages children to express thoughts and feelings in other forms than words, and it aids them in the process of finding meaning behind the language they are exposed to. Words that would be rarely used outside of the context of the sensory room will need no explanation as the children will be able to gain first-hand experience about their meaning through exploration.

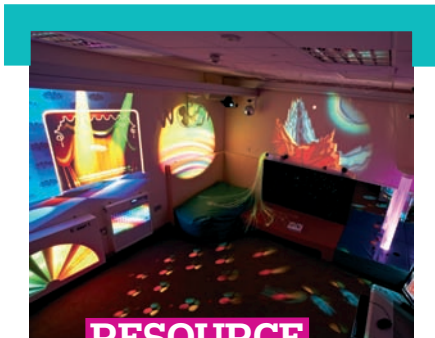
CREATIVE DEVELOPMENT

Sensory experiences and open-ended sensory resources will motivate children to find solutions and engage with new situations. Given the nature and circumstances of the sensory education there are no frameworks, preset activities or expected outcomes; therefore all children can experience success on a personal level. The positive sensory experience will encourage the children's desire for future learning.

KNOWLEDGE OF THE WORLD

As humans we perceive all of the world around us through our senses. The term 'sensory learning' refers to the way young children use all of their senses to gather information as they play and engage in experiences and interactions throughout their days. They use all these senses - combined with movement - as they play to build understanding about how the world works and to develop ideas to be used later. Children's active involvement in everyday sensory experiences works to both collect and fine-tune this information, and gets it ready to be used in subsequent play and life experiences. Sensory rooms support children to use their senses to the full potential. This active involvement in their own play, learning and discovery changes and transforms their knowledge, their skills and abilities, their values and their ways of seeing the world.

Judit Horvath is manager at Olympus KeyMed Day Nursery, an 'outstanding' setting in Southend, Essex.



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