If the environment is the third teacher what language does she speak?

Ann Pairman and Lisa Terreni

Our motivation to write about the significance of developing quality early childhood environments for young children comes from many years of hands-on teaching in early childhood centres[1]. Our current work for Early Childhood Development, which includes professional development, playgroup work and advice to establishing services, has heightened our awareness of issues relating to early childhood environments.

Through our work we have been struck by the number of groups looking at behaviour management issues. However, we have noticed that when teachers and parents carefully observe the environment and children's interactions within that environment, and implement appropriate changes, there has often been an instant and startling positive impact on the children's level of involvement in activities and their interactions with each other.

Another major influence on our thinking has been the work of early childhood educators from Reggio Emilia. We are interested in how the theoretical underpinnings of their approach has manifested in New Zealand and other Western countries. The influence Reggio Emilia programmes have had

on early childhood educators' thinking - in the design of educational equipment, use of colour, space and lighting in early childhood centres, and the growing awareness of the importance of aesthetics in educational environments, reinforces our own belief that the Arts and aesthetics education are integral to developing quality early childhood programmes.

We have titled this paper *'If the environment is the third teacher what language does she speak?'* because we believe the early childhood environment gives children important messages and cues. In other words, the environment 'speaks' to children - about what they can do, how and where they can do it and how they can work together.

"What is in a space, a room or a yard, and how it is arranged can affect the behaviour of people; it can make it easier to act in certain kinds of ways, harder to act in others. We don't ordinarily think to take out a deck of cards at a dinner table set for six, even though the number and arrangement suggest a poker game. The whole setting gives us cues about expected behaviour, and generally we do what we have been invited to do…in a similar way, particular settings invite children to

involve themselves in particular activities, and the extent of children's constructive participation in the activity will depend in large part on how well certain concrete. Measurable aspects of the surrounding physical space meet their "hunger, attitudes and interests…"[2]

The adults and teachers who work in the early childhood environment largely construct the 'language' of the environment so it is important that educators understand this language. It is our belief that a quality environment responds to the hundred languages of children identified by Loris Malaguzzi (pedagogist director of the journal 'Bambini' and a key figure in the development and promotion of the Reggio Emilia early childhood centres) in his poem *The hundred languages of children*.[3] The early childhood environment needs to say to children… Yes! This is a place for singing and understanding, a place to discover, to invent and to dream, a place for listening and marvelling.

We've identified three key aspects to any early childhood environment as the physical environment, the interactional environment (social interactions within the environment) and the temporal environment (routines/time). However this paper only attempts to examine two key areas of the physical environment - organisation and aesthetics. We consider that these two key areas contribute significantly to the messages and cues given to children by the environment.

In this paper we also comment on the way the physical environment influences the emotional climate of an early childhood setting, and the influence this has on children's

learning and well being. We make suggestions about planning an environment that caters for a mixed age group.

Diagram 1
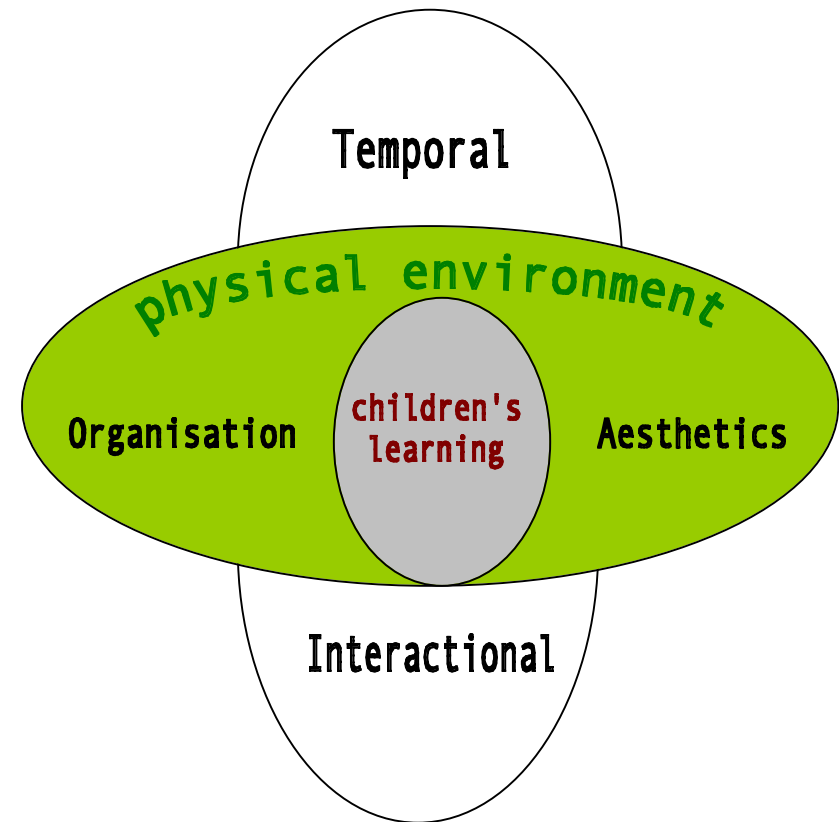
The key aspects of an early childhood environment

Organisation of the physical environment

Organisation of the physical environment involves two key areas - the physical definition of activity areas and the equipment within these activity areas.

Defining activity areas
Most early childhood teachers recognise the importance of defining areas of activity for children. However, it is surprising how often these areas are poorly located in relation to each other. Block and construction areas can be found in front of dramatic play areas, indoor climbing equipment is occasionally found in the middle of the art area, or within an otherwise quiet space. It is often difficult to find pathways which allow children to move freely between areas, or have a clear view of what is available. Outdoor climbing equipment often obscures children's view of quiet spaces, making it difficult for them to effectively self select activities.

Why this occurs has been of interest to us, and it is worth reflecting on some possible reasons in order to find ways to overcome barriers to change. Visiting a centre and observing the children's movement with 'new eyes' is a luxury the professional development coordinator's role affords us. After talking with teachers and observing children it appears that, as in our own homes, spaces, equipment and colour choices, have often evolved from years of piecemeal change. Many aspects are as they are, simply because they have always been there. For example, the location of the lino, laid years earlier, will forever define the art area.

Teachers often have few resources (especially time and money) to step back with a view to revamping the centre. And, unless there is sufficient time and support to reflect and plan, it seems almost impossible. It's not! In our experience, changes that radically affect the way children utilise the learning environment are often cheap and achievable.

Another challenge in the organisation of space is the extent to which centres differ from each other in relation to the age range, group size and the length of the day. The organisation of space in a kindergarten setting is unlikely to work in a mixed age setting. Articles written about environment planning, often focus on infants and toddlers *or* older children, but seldom both. This is probably because centres catering to children from 0 – 5 years in other countries[4] tend to have a greater degree of age separation than many New Zealand centres.

Because of this complexity, teachers need time to reflect and plan so they can create physical spaces that respond to the languages of the children in their care. It is important that teachers seek support wherever possible, through professional development and utilisation of other professionals such as, architects, landscape gardeners, colour consultants and interior designers.

Anita Olds (1987) suggests that well designed activity areas have five defining attributes:

"…i) a physical *location*; ii) visible *boundaries*, indicating where the area begins and ends; iii) *work* and *sitting surfaces*; iv) materials *storage* and *display* and v) a *mood* or personality."[5]

These attributes will be used as a framework for the following discussion.

Physical Location

Flow
The relationships and 'flow' between activity areas are crucial factors in creating environments that support children's need for a range of experiences including: self initiated quiet times, enjoyment of a sense of order, a feeling of belonging, participation in collaborative activity and the chance to make a mess!

It may seem obvious that quiet areas are located together, away from noisy areas, while art areas need water and clean up equipment. However the juxtaposition of these areas requires careful planning. Although water and paint will both need to be near a sink, it is probably better for the paint to be closest to the reading area because the movement and talk occurring around a water trough may be distracting[6].

Existing structures
When defining areas of activity, opportunities presented by the structural aspects of the building should also be taken into account. Features such as a fireplace or window onto an interesting view can be capitalised on[7]. For example, platforms can be built below windows to allow children to reach a view, whereas nooks and crannies lend themselves to development as retreat spaces. Canopy trees also provide opportunities for the development of a quiet space, while existing undulations may support large motor equipment such as tree stumps and low slides. How each area is developed will then affect the choice of nearby activity spaces. Areas of high use should be spread through out the available space so that children will be more inclined to work as part of small groups or as individuals rather than 'bunching up'.

Pathways- indoors and outdoors
Once areas of activity have been tentatively planned, it is important to consider the flow of activities from the children's point of view. Children need to know where they can find things in order to set their own goals - so they can decide what they are interested in and how they will manipulate the materials to explore those interests. This assists children to re-construct their knowledge in different activity areas e.g. play with bones in the sandpit may be transferred to representation in the art area or further exploration through block play. In order to regulate their own emotional needs children need to know where to find quiet spaces, busy, noisy spaces, or spaces where they can have physical contact with adults.

Lino pathway - Early Years Childcare Learning Centre (under twos), separates an active space form a quieter area.

Choices should be visually evident and easily accessible. Thus the organisation of space must include the development of clear pathways. Kritchevsky, Prescott and Walling (1977) describe a clear path and adequate empty spaces as the main criteria for good organisation. They define a path as,

"…the empty space on the floor or ground through which people move in getting from one place to another; it need be no different in composition from the rest of the surface … if an observer looking at a play area can't answer readily the question. "How do children get from one place to another?" probably the children can't either, and there is no clear path".[8]

Adults should try crouching low to look at the view, then move around the spaces at the child's level. There is no clear path if you have to negotiate climbing apparatus or step over other play activities in order to reach the desired activity area.

Outdoor areas may include the incorporation of very defined pathways, which incorporate different textures. The width and texture of an outdoor path gives children messages about how the path, and the space it leads to, can be used. Differing textures can also help to create sensory interest for children (especially crawling babies) and define areas of activity.

Path leading to pine needle pit – Northland childcare centre

Indoor floor coverings

When setting up a new centre a basic guide for floor coverings is: one third of the floor area carpet and two thirds lino. It is useful to begin by drawing in areas of activity on your plans to highlight the location of wet and dry areas. Lino can always have large carpet squares added later, and can in fact be useful in helping to define spaces e.g. the block area. However centres with too much fixed carpet find their ability to change the layout of the centre, or offer messy play that can be transported by the children, severely limited.

Visible boundaries

Once the layout of activity areas has been reviewed, each area should be defined by clear boundaries. This does not mean that children cannot move equipment from one area to another. However, clear boundaries offer children a sense of order that encourages them make purposeful choices and feel empowered by their ability to find things. Children operating in areas with clear boundaries tend to become more deeply involved in activities for longer periods of time.[9]

Colour

Boundaries can be created by using differing floor coverings, matching colour within an area, hanging fabric to create a 'ceiling', or utilising carpet covered risers or existing shelving. Anita Olds (1987) describes colour as "…the most powerful visual organiser."[10] Deliberate and discerning use of colour is often neglected in early childhood settings in New Zealand. There is a tendency to create visually cluttered environments through the use of bright colours scattered throughout a space.

An example of how colour can give messages to children can be seen in the grouping of tables and chairs. By painting them in one matching colour, a visual message about where they belong and how they are to be put back after they have been used is given. It also allows the child's focus to be drawn to new items of interest, without too much visual distraction, e.g. to a vase of flowers or a bowl of fruit. When the tables and chairs are presented in an array of bright colours become less visible. rather than standing out as items of interest and beauty. They add to visual confusion rather than standing out as items of interest.

Two green seats make a strong visual and physical statement about the area presented to children.

Fabrics and other transparent materials

The provision of retreat spaces is particularly important for young children who seek quiet time or wish to explore with others in private. One way to create boundaries for this type of area, is to utilise semi transparent fabrics, coloured perspex and partial dividers. These materials can offer children a sense of privacy while allowing a degree of supervision. Boxes, barrels with openings, soft spaces with large cushions and blankets can also offer children retreat space.

Low shelving and fabric create dividers – Wellington Law Centre Creche.

Shelving, partitions and screens

Screening off an area is an effective way of creating separate and new spaces. Screens made of transparent materials allow children to see through the screen, and assist with supervision. Utilising existing shelving is also an effective way to screen off areas.

Screens in use at the Melbourne Early Learning Centre

Work and sitting surfaces

The language of chairs

Although very few activities need involve actually sitting at tables, small chairs are the predominant seating surface in many early childhood services. For example, in an art area the creation of a work space using a table top is very appropriate. However, if we want children to mix media, construct with a variety of materials and, at times, work together to solve their construction problems and share their ideas, why provide lots of chairs? These tend to give the message that you should sit in a specific place and work in the space in front of you.

While very appropriate for lunchtimes, and some activities eg complex manipulative tasks such as puzzles, chairs may be limiting in other areas. For instance, it is our observation that children tend to move more freely, and experiment with more materials, in art areas that have few chairs.

Getting down low

Where raised seating is appropriate, small boxes or reels can create less clutter, more flexibility and are often easier for very young children to perch on, or get on and off with ease. However, it is also worth considering the use of very low tables which can be useful for activities such as puzzles. In this case cushions provide good seating. It is possible to buy tables with extendable legs in New Zealand.[11]

Moveable, carpet-covered risers (which can form display surfaces, developmental barriers, and support babies learning to stand and walk) also provide good seating surfaces for both

adults and children. Changes in surface heights can give a sense of increased space.

Moveable. Carpet covered risers

Outdoor seating is crucial and often inadequate. Low spaces suitable for adults and children are particularly important around sandpits. Quiet reflective spaces (where children may observe and 'opt out' of the actions) should also have comfortable seating.

It is also important to consider how well furniture meets the needs of adults in each area. Children tend to locate where there are adults, and this can cause over crowding if the adults congregate in only a few 'adult friendly' areas.

Storage and display

Crook and Farmer (1996) believe that the presentation of equipment and resources should say *"…'come and get me', inspiring feelings of excitement, intrigue and the desire to explore."*[12]

In order to make 'ordinary things look extraodinary'[13] presentation should be uncluttered. It is important to think about the focus of an area. In the book area, for example, a choice of books may be one focus while the couch, with inviting soft cushions, may be the other. Fabrics, colour and display should support these different foci. Too many books can lead to visual clutter and reduce their appeal to children. An array of posters and different coloured shelves, walls and fabrics can have the same effect.

Wicker baskets are both functional and look attractive – Wellington South Kindergarten

Having fewer resources on display at one time, allows adults to keep areas inviting by maintaining attractive and dynamic presentation. When the resources on display are pared back, storage options must be located close by. Equipment that is stored near to its related activity area is much more likely to be utilised effectively.

The challenge of mixed-age settings

Katz, Evangelou & Hartman (1990) describe mixed-age groupings as situations where children *"..who are at least a year apart in age…"* are placed in the same 'classroom' groups.[114] The same writers point out that the resulting range of competencies within a mixed-age group *"..gives rise to cognitive conflicts and opportunities to lead, instruct, nurture, and strengthen skills and knowledge already acquired in the course of tutoring others".[215]* They suggest that curriculum should be oriented towards projects and activities that encourage collaboration and the use of peer tutoring, cooperative learning and spontaneous grouping of children. These points are consistent with the view that children are 'communities of learners' and the Vygotskian approach to scaffolding children's learning. However it should be noted that the authors tend refer to, and give examples of, situations where the age 'spread' is less that two years except where the group size is very small.[16]

While Greenman and Stonehouse (1997) also support mixed age contexts in their book Primetimes[3], they

also make the following important point.

"If the age range extends beyond 18 months, …[it]…is a challenge to provide the range of materials, equipment, and experiences needed by children of diverse ages within one space. There is often natural movement toward the lowest common denominator – that is, toward providing only materials and experiences that are safe and manageable for the youngest children and therefore do not fully meet the needs of the oldest children – or toward aiming for the middle, which slights both the older and younger children…there are … centres where twenty to thirty children under 5 years spend much of their day all in together 'family' grouping. This is a significant misnomer. Families are not of such size and this type of grouping places particular stress on the younger children in the group."[417]

The centres of twenty-five to thirty described by Greenman and Stonehouse mirror the most common model we experience in our work with New Zealand services. Even though, in many situations, the 'under two's' are separated from the older children for periods of the day, it is questionable how appropriate their learning environments will be given the overall space available.

The New Zealand experience offers particular challenges in relation to the provision of safe but challenging opportunities for exploration. It is common to visit centres where older children seldom have access to small, intricate objects (such as

beautiful glass beads), potentially 'dangerous' equipment (such as nails, hammers and drills), or messy equipment (such as dye, screen printing). Similarly adult interactions with younger children in mixed age settings may focus on preventing children from exploring with their whole bodies – because the equipment is inappropriate.

The following ideas may be useful when considering how to create a safe but challenging environment for all children.

- Create some spaces specifically for infants, toddlers and older children while including large spaces which can be developed into environments for shared activities.

- Low physical barriers, such as risers, can be used to define areas for young babies by giving older children the message "…this is a 'low', 'slow' space…you're welcome to join the babies but you need to go slow here".

- Low, interesting fencing can be incorporated around spaces such as the carpentry 'house', so that very young children can interact with older children and use the equipment, but only with very close adult supervision.

- In a shared space fewer objects, such as complex puzzles, need be on display at any one time. A high shelf or cupboard, located close to a puzzle area, could contain puzzles for older children's access.

- A high table with a rim (and adult chairs) can provide a surface for older children to work with very small, manipulative equipment.

- The creation of loft areas can provide spaces for older children while also offering young children interesting enclosures and small spaces underneath. Removing the first step of a loft ladder can maintain an age appropriate barrier. However, appropriate opportunities for very young children to climb 'up and over' should also be offered within the early childhood setting.

One has to question whether the provision of quality spaces, which are tailored to the needs of infants, toddlers and older children, can be achieved within NZ's minimum requirement for 2.5 square metres of activity space

Hageley High Child Care Centre. Fence dividing play area for younger and older children.

Aesthetics

Aesthetics is a term that can be defined as the 'critical evaluation' of a piece of art (which includes the visual and dramatic arts, as well as dance and music) or a design, based on criteria that are seen as important by a particular culture. Often these criteria focus on intellectual concepts to explain 'what the aesthetic experience consists of'[18] e.g. the use of form, line and colour, themes of the work, combination of mediums, use of symbolism, etc. Inherent in this definition is an appreciation and recognition of the skill and craft of the artist who has executed the work.

Another definition views aesthetics as the appreciation of a pleasant and special sensory experience (usually visual, aural, or tactile).[19] However, as well as being pleasing to the senses, aesthetic objects or situations often involve other features 'that are pleasing to the cognitive faculties: repetition, pattern, continuity, clarity, dexterity, elaboration or variation of a theme, contrast, balance, and proportion.'[20]. For example, a display of natural materials can be aesthetically pleasing not only because of the inherent natural beauty of the materials themselves but also because of the way the objects are arranged (balanced, contrasted, spaced), and where they are situated (light, access, proximity to other activities). Inherent in this notion of aesthetics is the premise that aesthetic experiences are pleasurable and involve an emotional response from the spectator.

For the purposes of this paper we are using this second definition of aesthetics. It is our belief that there are certain factors inherent in this definition that can be used when planning a quality early childhood environment. However, it is important to note that aesthetics as the understanding and appreciation of the Arts, also has a crucial place in early childhood programmes and that the two definitions of aesthetics regularly intertwine.

It has been our experience that many early childhood centres in New Zealand overlook attention to aesthetics in the environment. Other early childhood commentators have noted. "Aesthetics is a worthy but often unconsidered goal when designing the visual environment for infants and toddlers (and pre-schoolers). Children are more likely to grow up with an eye for beauty if the adults around them demonstrate that they value aesthetics."[21]

Unlike Italy and many other European countries, sectors of New Zealand society have yet to establish a cultural identity, which embraces the Arts. Pakeha culture has have a pioneer tradition of 'do it yourself', and 'number 8 fencing wire' workmanship, which is determined by functionality, immediate usefulness and cost cutting. This approach generally excludes considerations of good design principles or aesthetics. In early childhood settings the result of this type of approach can be disastrous, particularly in the development of outside play areas. However, the use of trained designers, architects and landscape architects can ensure that costly and ugly mistakes are prevented.

We have observed that many New Zealand early childhood centres, while providing a good range of resources and experiences for children, are so cluttered with materials and equipment that the aesthetic qualities of many objects are lost in a confusing jumble. Some centres cover their walls with 'cute'

paintings of commercial images or adult art, which is not only unimaginative but also dominating. Large murals also create a high degree of inflexibility in an area by locking the space into a particular style.

Presentation of children's work is often not well considered and art work is either randomly or chaotically displayed on centre walls, or in some cases, entirely absent.

Good aesthetics result not only in an overall sense of attractiveness and beauty within an early childhood centre, but also gives pleasure to those who work and play in the centre, and to those who visit. It has been noted that centres that are dingy and unattractive can result in a negative perception about the children who attend the centre.

' …The need for beauty is particularly important in centres for handicapped children and their families. If parents associate only ugly places and experiences with their children, soon the child, too, is seen as ugly'.[22]

De-institutionalising early childhood environments is important not only because hundreds of New Zealand children spend a considerable part of their early years attending one type of service or other, but primarily because

'…the trappings of an institution act as barriers to the development of warm, trusting relationships, a sense of community, and feelings of ownership and belonging.'[23]

Cushion nook at Playspace Parent Co-op provides a beautiful retreat space for infants and toddlers which has variety of colour and textures.

Good aesthetic decisions can help to de-institutionalise environments such as early childhood centres but also hospitals and other institutions where young children are cared for, for long periods of time We believe a good early childhood environment should be made as 'homelike' as possible.

Often making an environment more beautiful and inviting, results in individual objects and equipment getting the respect and care they deserve, and they can then be used and appreciated to the fullest.

Display with Van Gough's Sunflowers, art books, dye and drawing pens on light box – Lauriston Kindergarten.

Mary Jalongo and Lauri Stamp (1997) describe some of the aesthetic considerations a teacher may need to make when setting up her classroom.

'In order to arrange the room, to make it aesthetically pleasing, and make it inviting to children, she will need to do much more that staple a couple of pictures up on the bulletin board. She will need to plan ways to make the room operate smoothly and consider things such as traffic patterns and where to locate quiet, noisy and messy activities … she will need to arrange materials so that children can locate them readily and take responsibility for putting them back in place. To make her classroom more welcoming and homelike [she] has brought in several large pillows, her collection of art prints, an old rocking chair…and a vase for flowers, Display areas for children's work are another consideration in making the room aesthetically pleasing. [She] has covered some low shelves with plastic shelf liner so that the children can display their clay creations. She also has covered her bulletin boards with paper in dark hues so that the children's crayon self portraits will stand out…' [24]

Jalongo and Stamp point out that these aesthetic considerations support the teacher's child-centred approach to teaching and that the environment that has been developed 'speaks' to the children about how she wants them to use it. The teacher is able to combine both beauty and functionality.

Key aesthetic considerations for an early childhood environment

It can be seen that consideration of aesthetics in the early childhood environment must include the careful organisation of space and often aesthetic and organisational considerations will overlap in many areas. We have identified several key aesthetic considerations that can be used when establishing and reviewing an early childhood environment.

Colour
- The internal colour scheme of a centre needs to create mood and define spaces. A particularly comprehensive reference book which discusses colour in detail is the *Child Care Design Guide* written by Anita Rui Olds[25].

- It is important to determine floor colours first so that the walls can be painted to complement the floor colour.
- Use primary colours cautiously. Too many bright colours may make children distracted and agitated or cause them to shut down their senses.
- Establishing centres, or centres having a total repaint, should call on the services of colour consultants. Paint retailers often have a free service.
- Colour can be added to a neutral background by incorporating fabric, paintings or other works of art.

Family corner – Lauriston Kindergarten, Melbourne

Light
- Use natural lighting whenever possible – natural light is healthier and has varying qualities of illumination throughout the day.
- Avoid harsh fluorescent lighting – these can create agitation.
- Use full spectrum lamps with a CRI of 85 –90[26] (can be available as fluorescent bulbs).
- Consider having a range of different light sources in the centre e.g. lights with dimmers in sleep rooms, lights with upward facing tubes that do not glare into babies eyes, wall mounted goose-neck lamps, mini halogens for art work or bulletin boards etc.

Display
- Display objects that arouse curiosity and wonder.
- Use both natural materials and found materials in the programme.
- Make sure materials are presented in an orderly and considered way.
- Reorganise materials once children have finished using them so they retain their appeal.
- Arrange and display objects in different ways so that children's curiosity is aroused.
- Display a variety of art work or objects d'art in the centre – different styles, from different cultures, in different mediums e.g. sculpture, pottery, weaving, tapa cloth, art prints from the library.
- Display children's work in careful and respectful ways. It is often better to highlight one or two paintings rather

than a mass of work. Framing can highlight and transform children's work.

- Display documentation – written and photographic, in a well spaced and orderly way, preferably at the children's level.
- Ensure parent noticeboards are uncluttered and attractive, and regularly updated so old material is removed.
- Avoid presenting 'cute' commercialised images to children as art work. Present a range of images that encourage imagination and discussion.

Children need to be presented with a diverse range of styles and images that challenge children to think about different ways subjects can be portrayed.[27]

Sensory experiences
- Provide experiences, materials, and equipment that are sensory rich – visual, aural, tactile, and olfactory.

It is important that teachers of young children model an appreciation of beauty and aesthetics for young children. Because young children are so open to sensory experiences it is the perfect time in a child's development to encourage their faculty for wonder and 'marvelling' at beautiful and 'special' things.

*'It is not necessary to be an artist to help young children enjoy the creative process or to help them gain pleasure from the creations of others. It **is** necessary to believe that experiences with beauty, the arts, and nature are valuable parts of all our lives'* [28]

In conclusion, we strongly argue that careful organisation and aesthetic considerations influence the emotional climate of an early childhood centre and children's learning.

We have regularly observed that an unattractive, chaotic, and noisy environment is likely to hype up children's behaviour so they become disruptive and disrespectful of the environment, and the materials and equipment within it. Conversely, we have seen environments that are too pristine and immaculately tidy which do not provide enough challenges for children. Children who are bored, who have their creativity stifled by too many controls in the environment, and who are not challenged enough will also manifest disruptive and disrespectful behaviour.

We sometimes hear people say, "We'll sort out the environment then we'll start on the programme planning" as though they are different. When refecting on the environment, those involved need to observe how children's learning is being supported and encouraged. Learning goals can be set, and strategies consistent with Te Whaariki, can be implemented (see Appendix 1). Planning the environment *is* part of programme planning.

[1] Lisa Terreni has worked in kindergarten with three and four year old children. Ann Pairman has worked in in child care, mainly with infants and toddlers and mixed age settings.

[2] Kritchevsky, S., & Prescott,E., with Walling, L. (1977). *Planning environments for young children: Physical space (*2nd ed.). Washington DC.: NAEYC, p5.

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[8] Kritchevsky, S., & Prescott,E., with Walling, L. (1977). *Planning environments for young children: Physical space (*2nd ed.). Washington DC.: National Association for the Education of Young Children, p17.

[9] Crook, S. & Farmer, B., (1996). *Just imagine. Creative play experiences for children under six*. Melbourne: RMIT Publishing.

[10] Olds, A. (1987). *Spaces for children: The built environment and child development.* (Ed. Weinstein, C. & David, T.) New York: Plenum Press, p132

[11] Starex furniture catalogue

[12] Crook, S. & Farmer, B., (1996). *Just imagine. Creative play experiences for children under six*. Melbourne: RMIT Publishing, p 16.

[13] Kolbe, U., Shephard, W., & J Eaton. (1994). *Mia- Mia Child and Family Study Centre handbook.* Sydney: Macquarie University.

[14] Katz, L., Evangelou. D., & Hartman, J.A. (1990). *The case for mixed age groupings in early childhood education*. Washington DC: NAEYC, p1.

[15] Ibid.

[16] Ibid.

[17] Greenman, J., & Stonehouse, A. (1997). *Prime times: A handbook for excellence in infant and toddler programs.* South Melbourne: Addison Wesley Longman, p44.

[18] Dissanayake, Ellen. (1992). *Homo Aestheticus: Where art comes from and why*. New York: The Free Press. p24.

[19] ibid. p 54.

[20] ibid p 55.

[21] Gonzales-Mena, J and Eyer, D.W. (1994). *Infants, toddlers and caregivers (4th ed.).* California: Mayfield, p 94.

[22] Olds, A. (1987). *Spaces for children: The built environment and child development.* (Ed. Weinstein, C. & David, T.) New York: Plenum Press, p137.

[23] Shephard, W and Eaton, J. (1997). Creating environments that intrigue and delight children and adults. *Child Care Information Exchange 9,* 46.

[24] Jalongo, M and Stamp, L. (1997). *The arts in children's lives: aesthetic education in early childhood.* Boston: Allyn and Bacon, p8.

[25] Olds, A., (2001). *Child care design guide.* New York: McGraw-Hill.

[26] Colour Rendering Index (CRI) indicates the effect of a light source on an object. Sunlight has a CRI of100 and is optimal.

[27] (1994). *The Lion King*. [Dingley, Vic]: Reed for Kids.

[28] Feeney, S., & Moravcik, E., (1987). A thing of beauty: Aesthetic development in young children. *Young Children, 42 (6),* 11.

Appendix 1

Planning the environment – links to Te Whaariki

When reflecting on the environment, those involved are observing how children's learning is being supported and encouraged. Learning goals consistent with Te Whaariki can then be planned for and strategies implemented.

Warm soft, textured spaces invite children to snuggle up to adults (or their favourite teddy), lye down and observe others or reflect on photos from home. The softness of a home like setting is likely to be particularly supportive to children during the settling in phase. Good presentation of items which interest children will encourage their curiosity and tendency to become involved (Strand 2 -Belonging).

Having a strong sense of well-being allows children to become deeply involved in activities. Feeling physically and emotionally safe are important pre-requisites to sense of well-being. The organisation of quiet spaces, defined areas of activity, safe challenges, and areas that encourage small group opportunities (where individual needs are met and relationships can become robust) will support children to develop feelings of emotionally and physical safety (Strand 1: Well-being).

Well presented materials invite children to explore and making the 'ordinary extraordinary' will support this tendency. Consideration of how the environment offers appropriate challenges for all developmental stages is crucial if teachers want to engage children's minds and encourage a tendency to persist with difficulty, challenge and uncertainty[28]. (Strand 5: Belonging).

An environment which draws on the Arts is highly conducive to children's developing abilities to express themselves through their 'hundred languages'. Painting, sculpture and drama will be enriched by children's surroundings A well ordered environment, that encourages children to make considered choices, is also likely to encourage communication amongst children and adults about those choices (Strand 4: Communication).

Adults working in a well considered, developmentally appropriate environment are able to spend a far greater proportion of their time interacting with individual children and supporting children's endeavours to collaborate with others.(Strand 3: Contribution).