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11. SUSTAINABILITY AND THE CREATIVE ARTS

> If we cannot imagine things differently we will not be able to bring about any alteration in our circumstances. (O'Neill, 1995, p. 152)

THE ARTS AND SUSTAINABILITY

The power of the Arts in promoting education for sustainability (EfS) lies in the affective nature of children's learning when they are engaged in artistic pursuits. As noted in Chapter 1, research shows that having knowledge is not sufficient to create behavioural change. Also needed are an awareness of our connections with and in the world and an attitude of caring (Fien, 2003). Sustainable living is a disposition that can be communicated and understood through engagement of the affective in an artistic or creative project. Teaching through the Arts links the emotional to the cognitive; it engages the heart as well as the mind and provides opportunities for children to explore issues, solve problems, collaborate and develop their ideas through creative experiences. The importance of this approach is well articulated in an early National Curriculum Council (NCC) document from the United Kingdom:

> Without curiosity, without the inclination to question, and without the exercise of imagination, insight and intuition, young people would lack the motivation to learn, and their intellectual development would be impaired … Were they not moved by feelings of awe and wonder at the beauty of the world we live in, or the power of artists, musicians and writers to manipulate space, sound and language, they would live in a spiritual and cultural desert. (NCC, 1990, p. iv)

The Arts offer universal languages that connect people with big ideas. They enable us to see the world around us in new ways and give us a rich set of tools for envisioning a better future for our world. They have the power to challenge our thinking, to inspire us into action and to engage us in dialogic and dynamic ways that enable us to think more deeply about our environment. The United Nations Environment Programme (UNEP) recognises the potential of the Arts to engender reflection on the environment and prompt human actions. Through its Art for the Environment initiative, the UNEP hopes that "sharing artists' deep sensitivity to the plight of the planet … [will] play a significant role in inspiring people to preserve the natural world" (Steiner, 2007, p. 8).

The Arts can help to "create inspiration" by encouraging positive relationships between people and place. In the face of global problems such as environmental degradation and social injustice, children can become overwhelmed and feel powerless to achieve positive change. The Arts have an important role to play in sustainability and in affirming the

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processes of care and repair. Traditionally, cultures have celebrated their relationship with the environment through seasonal rituals, harvest festivals, and events that honour specific plants or animals. In certain parts of China, for example, the arrival of migratory swans is marked by the local people, who call the birds "winter angels". In Japan, an ancient myth tells of a carp that swims up the face of a waterfall. This story has become the central metaphor for an annual children's festival, which is celebrated with the hope that the children will grow up embodying the carp's qualities of strength and perseverance.

These kinds of events provide us with opportunities to reflect on our relationship with the Earth, to connect more meaningfully with the natural environment and to nurture the ties that bind communities together. Such festivals are a celebration of belonging to place and to one another, of affirming our place in the world and in our society. They foster our connections to place. They serve to remind us of the world in which we live, prompting us to re-affirm and periodically renew these relationships.

In the classroom, celebrations can be held in small or large ways. They can take simple forms such as marking moments of wonder, delight, awe, excitement or reverence, all of which can be experienced when children encounter earth, water, flora and fauna. They can take the form of a class planting a tree and marking that event in some way. Celebration can involve a whole-school festival, which might also connect to events in the local community. By engaging with the natural environment in a celebratory way, we can help children experience positive thoughts, feelings and associations with place and community. In these ways, the Arts can affirm our beliefs, celebrate our achievements and inspire further action (Curtis, 2007).

Sohail Inayatullah (1998) proposed the theory of "causal layered analysis" (CLA) as a method for achieving different futures. In exploring the application of CLA, Bishop and Dzidic (2014, p. 16) used the example of environmental sustainability problems in the Australian farming sector. They suggested that CLA facilitates "critical thought as to what the deeper, underlying causes of an issue are". Thought, in turn facilitates action directed towards creating alternative futures. CLA suggests action on four levels of analysis:

1. the litany (official, unquestioned views);
2. social causation (the data and systemic perspective);
3. discourse (ideological and discursive assumptions); and
4. myth and metaphor (unconscious, emotive dimensions).

Analysis of myth and metaphor most often appears in the work of artists and visionaries. It is engagement with this work that enables the challenging of long-held beliefs: "This level provides a gut/emotional level experience to the worldview under inquiry. The language used is … more concerned with evoking visual images, with touching the heart instead of reading the head. This is the root level of questioning" (Inayatullah, 1998).

In Chapter 3 of this volume, Kathy Jenkins discussed how using Jensen's model *of action competence* can engage children in "realising their visions for a sustainable future". Of Jensen's four facets of knowledge, enabling students to create visions of alternative futures can be particularly difficult. As we have done here, Jenkins cites Sohail Inayatullah's work as key in underpinning this facet. It is in assisting this sometimes difficult process of creative visualisation that the creative arts come to the fore. This level of engagement, of analysis of myth and metaphor through the Arts, has the potential to challenge and extend children's understanding of the world and how people can work towards sustainability.

THE ARTS AND EFS IN THE CURRICULUM

Both the Australian Curriculum (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2013) and the New Zealand Curriculum (New Zealand Ministry of Education, 2014) divide the Arts into distinct subjects. In the New Zealand Curriculum, the Arts comprise four disciplines (dance, drama, music/sound arts, visual arts), and in the Australian Curriculum five (dance, drama, media arts, music, visual arts). Both curriculums address exploration of sustainability through the Arts. The Australian Curriculum notes that students, when studying the Arts, will explore both sustainability of arts practices and the broader issues of people's relationships to their environments:

> The Arts provides opportunities for students to express and develop world views, and to appreciate the need for collaboration within and between communities to implement more sustainable patterns of living.
>
> In this learning area, students use the exploratory and creative platform of the Arts to advocate effective action for sustainability. This action is informed by a range of world views, and the need for social justice and ecosystem health. Students choose suitable art forms to communicate their developing understanding of the concept of sustainability and to persuade others to take action for sustainable futures. (ACARA, 2013, p. 25)

The New Zealand Curriculum lists ecological sustainability ("which includes care for the environment") as a value to be taught across all learning areas. By enabling engagement of the expressive and affective in learning about sustainability, the Arts play a very important role in developing the attitudes and beliefs necessary for children to make decisions about living sustainably.

In Australia, documents relating to EfS move beyond the general notion of engagement of the affective by explicitly suggesting that learning to care for the environment has a spiritual element. The most recent draft of the Australian geography curriculum (ACARA, 2014, p. 33) acknowledges the "spiritual value of environments (the Earth's 'spiritual' function)". In terms of teaching EfS, reference to and, where appropriate, the use of indigenous arts (both Māori and Aboriginal Australian) can assist in developing a spiritual focus. The strong connection to place, which is embedded in the culture of these indigenous peoples, illustrates how other cultures can develop a sense of place. Curriculum and cultural documents in both countries regard the use of indigenous stories and art in the curriculum. Teachers should consult these documents before drawing on indigenous art and art forms in their classrooms.

SUSTAINABILITY AND CONNECTION WITH PLACE

> [W]e require a ground, a connection, even in exile, to places on the Earth … it is precisely the difficulty of living in a specific place, with specific people, under specific conditions that inspires the need for reflection and a deepening of our understanding of what we truly need to live. (Smith, 1997, p. 2)

Relationships with and in place are central to the issue of sustainability. To understand how to live sustainably in terms of environmental, economic, political and sociocultural practices,

we must first understand place and the influences of people on place and place on people. Place consists of things both human and non-human; of things animate and inanimate. We have a relationship with all things, and all things exist in relation to all other things. Teachers and children need to understand and foster their own relationships with place if they are to understand the effects that their actions have on place.

Gaining understanding of our relationship with place thus requires us to *learn* about place—to be aware of the many different elements that make up place and the relationships among them. As Smith (1997) points out, because we live in specific places, deepening our understanding of them helps us to recognise what it is that sustains us. Aboriginal Australians have long told us that connection with place is vital for social, environmental and economic sustainability. Developing connections with place involves knowledge of place, but connection is more than knowledge: learning about place, coming to know place, necessitates a *sense of place*.

Sense of place is an embodiment of place, that is, we know place with and through our senses. Abram (1996) tells us that developing a sense of place requires us first to be receptive to place and then it requires the ability to respond appropriately and creatively to that place. We cannot respond appropriately if we do not first have a sense of place and of the interconnectedness and interdependence of all things in place. Also, as Gruenewald (2003) points out, places themselves have something to say. These ideas suggest that we should listen to place. With respect to the indigenous culture of Australia, "Aboriginal people speak to land—the human and the non-human attend to each other" (Rose, 1999, cited in Bonyhady & Griffiths, 2002, p. 3). Place, moreover, is not static but constantly changing, and our relation with place is mutual: "[P]eople make places, and places make people" (Gruenewald, 2003, p. 621). The challenge for us today is to understand who we are and how we can affect the changes that happen in and to our place. We therefore need to be able to imagine a sustainable future. But what we can imagine depends on what we know and sense.

The Arts offer an important medium for enabling both the sensing of place and the imagining of new and different sustainable futures. Through the Arts, children can create visions of the future that assist them to develop ways of being in the present and, in turn, enable emotional sustainability. Our imagining of the future is something we do in the here and now; it also influences the way we live in the here and now. The children in our classrooms will have varying levels of understanding of place, and various abilities to be receptive to and to respond to place. Because our sense of place is influenced by past and present experiences of different places, as well as by future imaginings of place, the sense that each of us has of place is unique. Each of us also has unique ways of acting in the present and unique visions for the future.

The activities in this chapter focus on children and teachers developing their collective sense of place through sharing their experiences and their visions, so enabling development of this collective sense of place and of creative visions that show us how we (our community, our country, our world) can live sustainably. A powerful example of creative teaching with regards to "a sense of place" comes from a school in England, where the majority of children have Indian heritage. At this school, the teachers decided to use all government funds allocated for professional development to send the entire staff to Southern India, the region where most of the children's parents were born. The teachers visited the children's relatives and friends, and there was a mutual exchange of gifts, messages and photographs. By

travelling and experiencing the places that were so important in the lives of their students, the teachers made strong place-based connections, and relationships flourished. The events had a profound positive effect on the children, their families and the local school community.

DEVELOPING AND EXPLORING CONNECTIONS WITH PLACE AND UNDERSTANDINGS OF SUSTAINABILITY THROUGH THE ARTS

The Arts can develop an awareness of place, foster an attitude of caring and contribute to teachers' and children's engagement with ideas and actions pertaining to sustainability. Children and teachers can engage in authentic learning experiences by having experiences *in* the environment, by learning *about* place and by acting *for* sustainability. These types of activities are not mutually exclusive because activities *about* place and sustainability may be conducted *in* the environment and may result in a public display *for* sustainability.

In the environment

The Arts activities considered here relate to those conducted in the built and natural environment or those used to inspire arts activities in the built and natural environment. As we have already stressed, learning in the creative arts can help students develop a positive attitude to and an authentic valuing of the environment, as well as a personal relationship to place. Arts activities conducted in the natural environment aim to develop increased sensory awareness and appreciation of and for the natural beauty of the environment. These kinds of activities work with values and attitudes because they encourage empathy with the environment. Practical outdoor experiences can be supported through interpretation activities during which students express their feelings and impressions via a variety of media in drama, dance, music, visual art and media arts (e.g., artworks, soundscapes, music composition) and embodying aspects of the environment through role-play and movement activities.

About place

The Arts activities of relevance here explore connection to and mutual relationships with place and the impact of these activities on the environment, society and the economy. Activities also include those that explore specific scientific concepts and social concepts. In this way, the Arts can support the development of *knowledge and understanding* of topics related to sustainability in science, history and geography. The Arts can serve as pedagogical tools for learning about concepts and processes related to environmental issues (e.g., modelling and role-playing in drama, artworks depicting environmental processes such as energy cycles, ecosystems and global warming).

For sustainability

Arts activities (or products of arts activities) can address issues of sustainability and can be presented in a public sphere for the purpose of advocating for sustainable practices. Learning can encourage *action to protect and conserve the environment*. Techniques such as process drama can give students an embodied experience of working in a proactive way to protect or

repair natural heritage. Artworks can depict transformation of environment from devastated to renewed; music and song composition can focus thematically on environmental renewal.

EFS CREATIVE-ARTS LEARNING SEQUENCES

The Arts involve both processes and products. The activities described in this chapter focus on the processes of the Arts as well as on the development of understanding necessary to inform action for sustainability. Often, the creation of a product may be secondary to the engagement of the children in the creative activities themselves. Other activities may focus on the product, particularly the activities *for* sustainability, which aim to produce some form of public display. The activities also focus on the development of the knowledge and skills of the Arts. For this reason, we present the activities as *learning sequences*.

Each sequence begins with a focus on developing an awareness of (a sense of) place, and moves towards securing a deeper understanding of the mutual relationships between people and place, and among all things. The later stages of the activities endeavour to engage the children's creativity in terms of imagining how places can and might change, and how the children can influence that change.

Each sequence is also designed to be taught over a period of time. The time taken will vary from one class to another, depending on the children's and your (the teacher's) experiences and confidence with the various artistic skills, and on the flexibility or otherwise of particular classroom programmes. The activities are adaptable for various age groups. Much depends on the children's prior experiences with the various artistic forms of expression, and on their abilities to be receptive to place. We have chosen to present only a few in-depth learning sequences as examples, and trust that you can use these as models for exploring other aspects of place with other media.

Figure 11.1 provides a diagrammatic representation of the learning sequences described in this chapter. It shows how each learning sequence focuses on a particular art form and place. You might like to start with the learning sequences described here or you might prefer to experiment with the various art forms and different places (see the resources listed at the end of the chapter for more ideas). You might also choose to mix and match the art forms and the places; for example, you could explore a special place through poetry, or the school playground/yard through dance.

So that you can facilitate the development of appropriate and meaningful learning sequences, we suggest that you will find it useful to consider the following questions:

- What connections do I have with place?
- What are the histories of the place where I live (European settlement, indigenous, geological)?
- What local sustainability issues relate to the place where I live/teach?
- What connections to other places do my students have?
- What is the cultural make-up of my class?
- In what ways do the students' cultural practices and stories relate to the Arts and to place?
- What art interests do my students have?
- What local art resources are available?

Figure 11.1. Learning sequences: developing "a sense of place" through the Arts.

Learning Sequence 1: Exploring place through installation art (Margaret Brooks)

In this section, I (Margaret) look at how teachers and children can collaborate with visual artists to explore elements of their environment. Christine McMillan, an Australian environmental installation artist, also works to engage young children in artistic processes relevant to environmental issues. One of the media Christine works with is gauze. Gauze is a very flexible and versatile medium that can be used to make elements of the environment visible. Figure 11.2 shows some of the many ways that Christine uses gauze.

Figure 11.2. Christine McMillan's use of gauze (McMillan, 2008).

As the images in the figure show, careful placement of gauze draws one's attention to something and raises awareness. Christine wraps, threads, hangs and lays gauze over and around objects. She creates passageways, enclosures, spaces, windows, screens, barriers and carpets. Essentially, she uses gauze to highlight elements of the environment, and she invites an interaction with her art through holistic engagement. We are invited to walk through, around and over her art, which creates new spaces and places for us to inhabit. We can experience the history and impact of human and natural elements as her art ages.

Symmetrical planting When Christine exhibited her installation "Symmetrical Planting" during an artist-in-residence event at the New England Regional Art Museum, Armidale, NSW, I teamed up with her, a class of 13 four-year-olds and their teacher. Christine shared the process of developing the installation with the children and helped them to create their own. The process was a multi-step one that you could apply to your own teaching contexts.

Christine's installation (shown in Figure 11.3) explored the issue of introduced species in our environment: in this case, poplar trees outside the art museum. These trees were planted in a symmetrical formation. Emphasising that symmetry through gauze wrapping creates an

experience of ordered space that is imposed on the environment. The trees, along with other introduced species, have overtaken the local native species and choked the adjacent creek land.

Figure 11.3. Christine's McMillan's Symmetrical Planting installations (McMillan 2008).

Introducing the children to Christine's ideas In her studio overlooking the installation, Christine explained her ideas and how she had prepared for building the installation. She showed her planning sketches and preliminary models. (It is important for children to know that art is about "big ideas" and that it involves much preliminary research, exploration and preparation.) She then asked the children to begin their work by drawing the installation from a distance. Such drawing focuses children's attention.

Next, Christine invited the children to experience the installation and to make more drawings. (Drawing from close observation helps children notice details and engage with the installation; see, in this regard, Brooks, 2009.) The children noticed things like insects and shadows. Inside the installation, the children came to understand how different spaces could be created and how these spaces changed the way in which they saw the trees and the world around them (Figure 11.4).

Figure 11.4. Children exploring the installation (McMillan, 2008).

Developing fluency with the media Christine, the teacher and I spent much time preparing the classroom environment and art materials, and sequencing and timing the experiences that would enable the children to create their own installations in the playground. The classroom

was uncluttered and focused. We displayed drawings and photos of the installation and reviewed and discussed them with the children, so helping them remember and refocus after their visit to the art museum. Once Christine had demonstrated possibilities for the art materials provided, we tried to replicate explorative studio processes with the children (Figure 11.5).

Figure 11.5. Developing media fluency (McMillan, 2008).

The children explored the potential of the materials and gained a degree of fluency with them that became important knowledge and experience for when they began creating their larger installations in the playground. Gauze was wrapped, layered, connected, pulled apart, tied and coloured. Each exploration was drawn, revisited and then shared with peers and the large group. The representation and sharing of ideas helped the children consolidate their learning and build a collective understanding. We were moving children from an initial, superficial encounter with materials to a deeper understanding of a process that engaged them with more complex ideas and processes (Brooks, 2006).

Children planning Christine reminded the children of her preliminary plans and models for the installation. She invited the children to consider elements of the playground that concerned, intrigued or surprised them. The children worked in groups to discuss and draw plans for their installations in their schoolyard. Drawing gives form to emergent ideas and

facilitates discussion. Drawing also allows children to integrate different ideas into a common plan—to develop a shared understanding and a common goal (Figure 11.6).

Figure 11.6. Planning the installations for the schoolyard (McMillan, 2008).

One group of boys noticed that one tree in the yard looked as if it were several trees. Together they worked to link multiple trunks with gauze so that they were rendered as one tree. A group of girls highlighted their ambivalence about the fence surrounding their yard. They saw the fence as both restrictive and protective. One girl worked alone to mend the trunk of a tree that was weeping sap. Another group wanted to see what a row of trees might look like if planted between two big trees. They used gauze to represent the line of imaginary trees. As each installation was finished, the children modelled Christine's practice and used cameras to record their finished work. The children also shared and discussed their installations and the ideas they embodied with one another.

At the end of the project, the children created a display featuring their learning stories and carefully selected samples of their work. They shared this display with families, friends and peers as a celebration of their work (Figure 11.7). This sharing represented a form of action for sustainability, because it enabled the children to highlight their place and their relationship to it and to draw attention to sustainability issues warranting consideration.

Figure 11.7. The children's installations in their schoolyard (McMillan, 2008).

Learning Sequence 2: Responding to place through musical composition (Ros Littledyke)

Music is fundamental to human existence. In our electronic and digital world, the paradox is that outstanding music of all types and varieties is available for us to listen to, yet opportunities for children to make music compete with the increasing academic demands of the school curriculum. Music is a language that feeds the soul. It adds richness and meaning to our cultures and marks our most joyful and solemn occasions. Opportunity to share it, to participate, perhaps even to understand some of its complexity and many delights, should be a part of every child's heritage. Music also lends itself well to cross-curricular teaching and learning and provides opportunities for developing transferable skills that can be applied across a curriculum (Figure 11.8). The skills and curriculum links identified in Figure 11.8 are not exhaustive but merely a starting point for further exploration and experimentation.

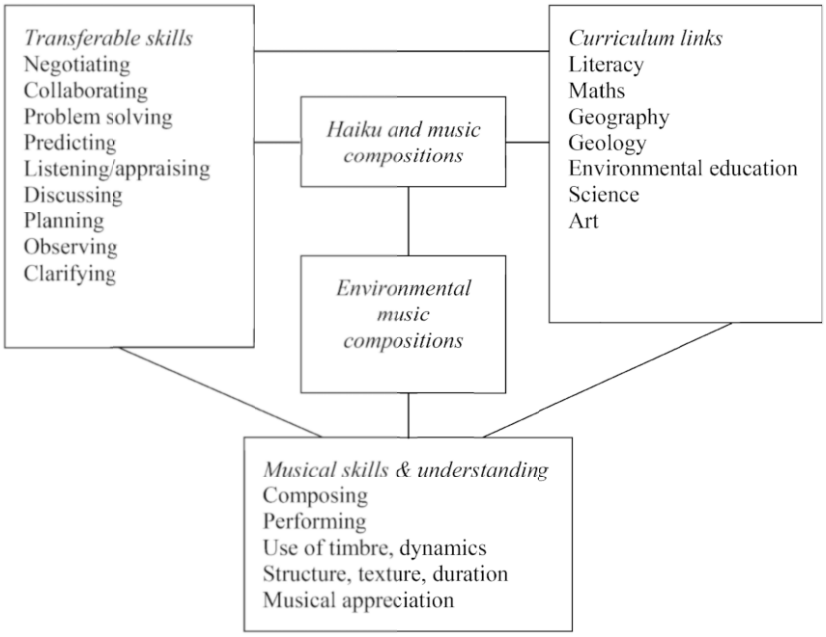

Figure 11.8. Curriculum links, music skills and transferable skills that can be developed through teaching music.

The learning sequences below (Tables 11.1 and 11.2) suggest two ways of encouraging children to respond to place through musical composition. The haiku and composition sequence offers a more structured approach, as it uses an established poetical form to reflect a place, while the composing from found objects sequence challenges children to create a composition based on what they see, hear and gather from an immediate environment. Such an approach to composition encourages children to look closely and become aware of an environment. It can also be used in such a way that children are able to make comparisons between different environments and heighten their sense of both a single place and the differences between places.

Additional activities The children can:
- express their compositions through dance, visual art, drama or literacy;
- record their compositions through graphic notation; and
- share their compositions and environmental messages with other classes or community members.

Table 11.1.Music experiences.

Haiku and music composition	*Curriculum links*
Children work in groups to draft a haiku about a place they have visited as a class or a place that has meaning for them	Literacy Cross-curricular skills Problem solving, collaborating, negotiating, writing within a given form
Children share their haiku with the rest of the class group and appraise/suggest ideas for improvement for one another	Critical literacies Maths Cross-curricular skills Listening/appraising, collaboration, problem solving
Children re-draft haiku	Critical literacies Cross-curricular skills Drafting, redrafting, collaborating, problem solving
Children compose music with un-tuned percussion to reflect haiku	Literacy, maths Cross-curricular skills Collaborating, problem solving, negotiating, drafting/redrafting/listening/appraising Music skills and understanding Composing, understanding of timbre, duration, dynamics, structure, texture
Children share compositions and appraise one another's work	Critical literacies Cross-curricular skills Problem solving, collaborating, listening, appraising Music skills and understanding Composing, performing
Children add a simple pitched composition using a pentatonic scale	Maths, literacy Cross-curricular skills Collaborating, problem solving, negotiating listening/appraising Music skills and understanding Composing, performing, understanding of timbre, pitch, duration, structure, dynamics, texture

Table 11.2. Composing from found objects.

Composing from found objects	*Curriculum links*
Children compose a musical composition from objects found in an environment suggested by the teacher or one they choose themselves. The environment does not necessarily have to be a natural one; often, a built environment can offer great scope for children's imagination and inventiveness. Audio recordings of sounds can also be used to reflect the chosen environment	Critical literacies, geography, art, science, ICT, environmental education Cross-curricular skills Discussing, collaborating, negotiating, observing, investigating
Children or teacher choose an environment	Science, environmental education, geography, geology Cross-curricular skills Discussing, collaborating, negotiating, observing, investigating
Children work in groups to find objects to create a sound	Science, environmental education, geography, geology, ICT Cross-curricular skills Observing, collaborating, discussing, problem solving, negotiating, listening/appraising, sorting, classifying Music skills and understanding Understanding of timbre, duration, dynamics
Working with teacher and whole group, children discuss the planned structure of the composition and how it can reflect the environment from which the objects are drawn; e.g., how would they musically reflect busy ants?	Critical literacies Cross-curricular skills Negotiating, problem solving Music skills and understanding Composing, appraising
Children work collaboratively to create a composition reflecting the environment from which the objects have been drawn	Maths Cross-curricular skills Problem solving, collaborating, listening/appraising, negotiating Music skills and understanding Composing, performing, understanding of timbre, duration, dynamics
Children perform compositions to the rest of the class group	Cross-curricular skills Listening/appraising Music skills and understanding Composing, performing

Learning Sequence 3: Expressing place through drama (Lynn Everett)

In this section, I explore how teachers and children can engage in drama activities that encourage a deeper understanding of the interdependent relationships existing between living creatures and their environments. The sequence relies on direct interaction with flora, fauna and habitat in the local area. The children learn about specific creatures in a local ecosystem by embodying them through dramatic role-play. As Lecoq (2000, p. 22) points out:

> [M]iming is a fundamental human action, a childhood action: children mime the world in order to get to know it and to prepare themselves to live in it … To mime is literally to embody and therefore to understand better.

By identifying with specific creatures, both physically and emotionally, children can develop empathy and understanding for the wildlife they are portraying and are therefore better able to see the world from another's perspective. In pretending to be a plant or animal, children "step into another's shoes" and gain an insight into that organism's day-to-day life. Encourage the children to adopt an attitude of caring and protection towards the individual animal/plant and the ecosystem as a whole.

The interactions between the life forms within the ecosystem also offer opportunities for the children to reflect on positive social relationships in terms of the ways in which different plants and animals depend on one another and often work symbiotically. These understandings can be seen as metaphors for building sustainable communities.

Web of life: ecosystem This activity involves the following steps:

1. Teacher researches an ecosystem that exists in the local area, for example, desert, forest, or rock pool community—consult National Parks and Wildlife, Landcare and/or Coastcare (Australia), Department of Conservation (New Zealand).
2. Class discusses ecosystems and food webs, especially interdependence of life forms in the system in terms of providing food, protection and places to live and reproduce.
3. Class goes on an excursion in the local area to observe interactions among the life forms in the food web and/or invites representative from National Parks and Wildlife or another expert to discuss local ecosystems.
4. Class creates a physical representation of the environment's food web/ecosystem. If the environment is a rock pool, for example, the class creates a "sculpture" of the pool using their bodies. Students sit in a large circle and discuss what is typically found in a rock pool environment—rocks, seaweed, sandy floor, crabs, rock caves. Teacher emphasises the pool's different levels. One at a time, students enter the circle and freeze their body into the shape of something in a rock pool. When all the children have taken up their frozen position, the teacher photographs the sculpture.
5. Teacher and students select five or six specific examples of flora and/or fauna in an environment that live and depend on one another in terms of feeding relationships. For example, life forms in a rock pool community might be (i) green algae (seaweed), (ii) reef heron, (iii) blue-ringed octopus, (iv) pipefish, (iv) reef crab, (vi) anemone.
6. Teacher invites indigenous elder and/or national parks ranger to talk to the class about these local flora/fauna. What is the significance of the animals/plants within the local indigenous culture? What human interactions threaten this ecological community?

7. Using the "jigsaw strategy", the class divides into six "expert groups". Each group is allocated one life form in the food web.
8. Each group researches their life form using books and/or the internet:
   - What does it look like? What shape and colour is it?
   - How does it move (when stationary and when moving from place to place)?
   - What words describe the way it moves (darts, slides, scuttles)?
   - Does it make a sound (either on its own or when moving through the environment)?
   - What does it eat, and what eats it?
   - Where does it live? Where/how does it hide from predators and prey?
   - What does it do when it is threatened?
   - How long does it live? How does it reproduce?
   - Does it have any interesting behaviour or special characteristics?
   - Where else is this creature found?
9. Each group develops a set of movements for their life form. These might relate to hunting, hiding, camouflaging, eating, reproducing and/or moving from place to place. For example:
   - The reef crab pretends to be dead when threatened by a predator.
   - The sea anemone tucks in its tentacles to avoid drying out at low tide.
   - The pipefish hides from predators by grasping the seaweed as camouflage.
   - The blue-ringed octopus, when threatened, shows its bright blue rings to frighten its attacker away.
   - The reef heron spears its prey with rapid lunges of its sharp beak (Pyers, 2004).
10. Each "expert group" presents a dramatic presentation to the class by performing the set of movements they have developed for their life form. This step can be done using the drama convention of "hot seating", in which the children take on the roles of the sea creatures/plants, allowing them to develop their voice and movement skills as they create their characters. The rest of the class pose questions to the group that is presenting, such as "What do you eat?" etc.
11. The class then forms "food web groups" by having one student from each expert group join a new group, thus creating a food web. Each student in the group thus becomes an expert on one of the six life forms in the ecosystem.
12. The food web groups discuss how the creatures interact with one another and what the relationships are among them. Each group creates a small dramatic piece about life in the rock pool and the interactions among the creatures in terms of hunting, hiding, eating and moving around the rock pool.
13. Groups present their dramatic pieces, accompanied by music. Part of the classroom could be used as the habitat, with a group of chairs serving as seaweed and rocks.
14. After watching the performances, the teacher and children appraise them and discuss what worked well and what might be improved for future performance.
15. Working together, students and teacher create a whole-class movement piece by combining the best aspects of all the group work.
16. Teacher and class discuss the interdependence of life in the food web and what would happen if something disappeared—seaweed, for example. Discussion can also focus on a real local or global issue that could affect the delicate balance of the food web, such as rising ocean temperatures. What are some possible solutions?

17. The class can also develop the drama to demonstrate the consequences of human actions that have a negative impact on the system. From there, they create a performance that depicts the problem and possible solutions. Use a real local issue. Have the children present the drama to other classes, the school or the community as a form of action for sustainability.

Learning Sequence 4: Exploring our place through movement and dance (Genevieve Noone)

Dance is integral in the Arts curriculums of both New Zealand and Australia. The dance aims in the Australian Curriculum include:
- body awareness and technical and expressive skills to communicate through movement confidently, creatively and intelligently;
- choreographic and performance skills and appreciation of one's own and others' dances; and
- making and responding to dance.

All levels of the curriculum contain cross-curricular priorities for dance, including sustainability.

In the New Zealand Curriculum, students:
- explore and use dance elements, vocabularies, processes, and technologies to express personal, group, and cultural identities, to convey and interpret artistic ideas, and to strengthen social interaction; and
- develop skills in performing, choreographing and responding to a variety of genres from a range of historical and contemporary contexts.

This learning sequence focuses on connecting the children to their local environment (natural and built) by having them explore the properties of the environment, now, in the past, and in the future, with and in their own bodies. The sequence begins with simple body sculpture and moves to free-flowing dramatic and dance movements.

Being comfortable with our own bodies helps us to connect with other bodies, as well as with non-human elements in our physical, social, cultural, economic and political environments. *Knowing* our bodies assists us to understand (i) how our bodies are connected to both the physical and metaphysical elements of place, and (ii) the influence of our bodies on place, and of place on our bodies. This knowledge also facilitates understanding of how our bodies can live sustainably with and in place. We gain this understanding by learning about how our actions influence place and how place influences our actions.

Once children are comfortable in their bodies—comfortable exploring their own body's movements, and comfortable creating movements that connect with and involve other bodies and other things (both animate and inanimate)—they will be ready to engage more meaningfully with various forms of drama including mime, puppetry, clowning, masks, improvisation, role-play and theatre, as well as with varied forms of folk, classical and modern dance, both choreographed and free. Confidence and competence in the various forms of dance and drama enable children to make creative use of these art forms and so engage meaningfully in exploring the often unconscious, emotive, spiritual and visionary aspects (the myths and metaphors) of sustainability.

If you are teaching children who are already experienced and competent in exploring and creating movement with their own and others' bodies, you could take the ideas in the following sequence and replace the basic movement activities with more complex and challenging drama and dance processes. You might also want to view the Bangarra Dance Theatre (2014) educational videos, either as background for yourself, or you could view them with your students to encourage exploration through modern dance theatre techniques.

1. Begin with students taking an observational walk in the schoolyard, making notes/drawings about (a) something (animate or inanimate) on the ground, and/or (b) something in the sky, and/or (c) something in between. The notes are to include how the thing looks, what sounds it makes (if appropriate), what it feels like and how it moves. Before setting out on the walk, discuss with the students how they could record these observations in a way that will enable them to recall them when they are back in the classroom (e.g., written notes, sketches, text–image combinations). (See Hinchman, 1997, for a detailed exploration of journaling place.) On returning to the classroom, the children can share the different ways they recorded their observations.
2. After the students have completed some preliminary warm-up (body awareness) exercises, have them, in pairs, sculpt each other into still images of the things they observed in the schoolyard. Encourage the children to discuss how the sculptures might be improved. For example, in what other ways could they show the height of the tree or the rough surface of the asphalt? The whole class can experiment with different ways to represent these things. Repeat this step with the children in groups of four or five, and one student sculpting the others.
3. After exploring various movements, ask the students to repeat the above process, but this time adding movement to their sculptures and focusing on how the movement can be represented rather than replicated. Ask the children such questions as: How else could you show the movement of the swings or the flight of the grasshopper? Also ask the children to explore different ways of representing these various movements. (See Meiners, 2004, for ideas about developing students' range of movements.)
4. Divide the class into groups. Each group choreographs a movement piece (dramatic movement, or dance, or a combination of both) of the schoolyard. Discuss with the students the relationships between the various elements of the schoolyard that they have chosen to include in their piece and how these relationships can be represented. For example, how can they show the relationship between the wind and the trees, or between the children playing and the grass/dirt/concrete, or between the children and the birds, or between the birds and the concrete?
5. Explore with the students how the schoolyard has changed and continues to change. Old photographs of the yard and stories or descriptions from past students would be useful here. The children can create sculptures and movement sequences to represent these pictures and stories. Then, using the movement exercises described above, they create sculptures/tableaux/movement pieces of how they would like the schoolyard to change in the future, paying careful attention to how changes to any one aspect of the school environment may affect other aspects of this place. For example, would changes to the natural environment (more or less garden) influence the insects, birds and other animals that do or do not currently visit the school yard?

6. Depending on the children's levels of understanding, you could encourage them to discuss issues concerning culture, economics and politics. For example, if the children envision a schoolyard where there is either more grass or more concrete, what materials would be required for the changes? Where would these materials come from? What resources would be used in creating the change? Who would pay for the upkeep? Who would decide what to change? What would be the advantages and disadvantages of the changes? Given all these questions, it is important to ask the children to consider answering them from many different perspectives.

Extension These movement pieces can be used as a basis for developing a dramatic or dance performance: visuals can be created and, if appropriate, the students could create musical accompaniments from found objects, following steps similar to those described in Learning Sequence 2.

Learning Sequence 5: Multi-arts exploration of place (Lynn Everett, Margaret Brooks, Ros Littledyke and Genevieve Noone)

This section provides an integrated, multi-arts learning sequence wherein children explore their local area/neighbourhood. The activities aim to develop a sense that places are not static but dynamic. Children gain insight into how places change over time and how humans make decisions that impact on and shape places now and into the future. As part of the sequence, children have an opportunity to contemplate and envisage a future for the place in which they live. Although this integrated project is most suitable for upper primary school children, it can be adapted for a range of ages.

Our town/neighbourhood This activity involves a number of thematic steps.

1. Being there

– Class discussion: Brainstorm what the class knows about the town or the local neighbourhood around the school, including the built and natural environments. Consider the following points:
  – What are the major geographical features (hills, mountains, watercourses and bodies of water, gullies, creeks, rivers, lakes, dams, oceans, canals, large drainage systems, swimming pools, caves or rock formations, quarries, skate parks, major roads, bridges, etc.)?
  – Where do the creeks or rivers come from and where do they go? Where is the catchment area?
  – In relation to the school, where does the sun rise and set? Where is north, south, east, west? Where do the prevailing winds come from at different times of the year? What are the weather patterns?
  – What are the areas of vegetation and animal habitation? What are the major flora/fauna?
  – What are the areas of human habitation, community services and industry?
– Excursion around the town/neighbourhood or specific parts of the neighbourhood: As the children walk around the area, have them record the sights, sounds, smells and textures. Drawing on the processes outlined in Learning Sequence 1, invite the children to make installations using gauze in a particular area of the local environment. These "records" can

be in the form of writing, drawing, texture rubbings, audio-visual recordings and so on. Visit the local lookout or tallest building and encourage the children to draw what they see from this vantage point. You and/or they could also create a soundscape made up of a compilation of the sounds they identify during the excursion.

2. The shape of this place

– Exploring maps: Find a topographical map or aerial photo of the town/neighbourhood. Ask at your local council, Department of Lands, or search the internet (see Google maps). Hold a class discussion aimed at identifying the features discovered through observations during the class excursion.
– Have the children, as a class, make a map of the town/neighbourhood and create symbols for the map's major features. Examples of symbols could be a triangle for hills and mountains, a circle for trees, a squiggly line for a creek or river and a square for the shopping centre. It is important that the class invents its own symbols rather than adopts symbols used by indigenous peoples of the area because these are an integral part of their spiritual traditions. Extension activity: ask the children to make a model of the town/neighbourhood using clay or plasticine and found objects.
– Tell the class you want them to (i) research how local land and water forms were created millions of years ago, and (ii) create a dance/movement piece that demonstrates the geological processes that occurred. For example, the class could portray volcanic events or the processes of erosion.
– Ask the children to use their bodies to represent the various features of the town/neighbourhood by creating a group sculpture. For example, three children could stand facing one another in a circle, with their arms stretched upwards to create a hill; individual children could sit with hands together above their heads in order to depict houses; two children could sit holding a piece of cloth at either end to represent a river or road.
– You could also have the children, in their groups, write a haiku or an acrostic poem form for each of the environmental features. Haiku examples:

Water dance and sing
Over rocks and down gullies
Creeklands give things life

Cars zooming around
Lots of concrete straight and curved
Roads moving us around town

The children could furthermore compose a tone poem that reflects the geological history of the place.

– Guide the children into presenting a dramatic performance of their town/neighbourhood using the class sculpture, and with each landscape "feature" saying their poem. Children from another class could compose music to accompany the performance.

3. Changing places—back to the future

– Encourage the children to talk to parents/grandparents/caregivers about the town/neighbourhood to find out how it has changed over time (other elders from, for example, the Country Women's Association or aged-care homes, could be interviewed).

– Invite a representative from Landcare, Coastcare, National Parks and Wildlife (Australia), Department of Conservation (New Zealand) to talk to the class about changes that have occurred over time to local flora, fauna and habitat.
– Have the class research old photos of the local area from family members or the local library, historical society, or newspaper archives.
– Help the class explore the history of European settlement in the area.
– Now ask the children to review their class sculpture and to alter it to reflect the changes that have occurred over time. For example, the children who depicted houses could transform into trees, forest or animals.

4. Creating places

– Talk to your students about stories from different cultures that explain how geographical features were formed (e.g., cultural creation myths, indigenous stories).
– Guide the children into developing a story that tells how the natural geography of the town/neighbourhood was created. Make sure they relate their story to specific local flora and fauna. For example: a giant brown snake made the river; the mountain was formed by a giant echidna that rested there; a group of boulders are people who have been transformed. The story should be the class's own invented story and not a local indigenous story.
– Ask the children to make a list of the sights, sounds, smells, tastes and textures that are important in the story and to incorporate these into the narrative.
– Let the children develop the story as a drama performance, with a narrator. Tell the children they are to make the shapes of the land features with their bodies and to do the same for characters such as the animals, plants and/or people.
– Have the class perform the piece for an audience. Encourage them to compose a piece of music employing percussion to accompany the storytelling. The children could also record their compositions in graphic notation.

5. Indigenous places

– Invite a senior indigenous advisor to talk to the class about the local Aboriginal or Māori people's relationship to the town/neighbourhood. Encourage the children to ask questions such as these:
  - What was/is the local indigenous relationship to place before and after white settlement in terms of food gathering, hunting, water, totems, social structure, spirituality?
  - What are some of the Aboriginal/Māori stories related to the area?
  - What is the work of local indigenous artists?

6. Visions of place

– Hold discussions centred on this question: How do we want our town/neighbourhood to be in the future?
– Lead the class in a guided relaxation and creative visualisation activity in which each member of the class envisages the town/neighbourhood in the future. Have the class discuss the children's visions of place.
– Set a task in which the students work in groups. Each group chooses a specific arts medium to work with. This can be visual art, music, drama, poetry or dance.
– Each group uses their chosen media to create an artwork that conveys their vision for the future of their town/neighbourhood.

- Have the groups present their art works and facilitate a class discussion based on the question of how appropriate their art form is in terms of presenting their vision.
- Begin another class discussion around this question: How can we get there from here? That is, how could we go about creating this vision of place for the future? What things would we need to do to bridge the gap between the present situation and our future visions of place? What actions would we need to take?
- Discuss with the children activities occurring in different parts of the world that are moving towards a sustainable future. Have the children conduct research using books and the internet to explore some of these activities. Search terms could include vertical gardens, reducing food miles, sustainable cities, green spaces, rooftop gardens, sustainable energy.
- End by having students consider possible actions that could be taken to address one or some of these issues. Help them to plan these actions and, where possible, take some action of their own for sustainability.

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