

# Enhancing Young Children's Museum Experiences: A Manual for Museum Staff



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# INTRODUCTION

In 1997, I invited staff from four Brisbane museums<sup>1</sup> to investigate what children learned in museums. Our initial collaboration included education staff from two large state museums, a science centre and a regional gallery with an art and social history collection. We met monthly to investigate children's learning in museums. We knew that learning was certainly occurring in the museums, but had little understanding of the depth of young children's ideas about museums and collections. Our curiosity led us to investigate what was happening in local museums for very young audiences. In 1998, we carried out four case studies and gained a greater understanding of some successes and barriers to children's learning in museums. But, if anything, our first study showed us how difficult it was to know what young children learn in museums.

From 2000 - 2002, we worked on our second project to examine children's interactive learning in museums<sup>2</sup>. In this project, we looked at the museum, school and family systems that deliver museum learning to young audiences. To start the project, we ran a staff development program that culminated with the design of innovative programs for young children's learning in each of our partner museums.

In the second year of our project, we implemented the new programs and gathered extensive information on the ways in which children learned. We investigated what children knew at the beginning of the year and checked that against the gains in their knowledge over time. Our children made nine visits to museums and had 16 classroom sessions that helped to augment ideas learned through exposure to the museums' exhibitions and collections.

The project focused on the immersion of children in the topic of 'museums', involving a school based component of studying about museums and a series of visits to museums. The first term was run wholly in four classrooms – museum teachers (from the QUT research team) and museum staff led classroom sessions with the children and their teachers on a regular basis. During this time the children learned about museums as a concept, about the people who worked there and about the collections inside. As a culmination of the first term curriculum, children created their own classroom museums made of special items from their personal collections. Using standard museum practice, they also made labels and held an official opening celebration to which they invited families, museum staff and members of the school community.

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<sup>1</sup> The original museum staff members of the QUT-Museums Collaborative (QUTMC) were: Queensland Art Gallery (Michael Beckmann), Queensland Museum (Derek Griffin), Queensland Science Centre (Graeme Potter), and Global Arts Link (Malcolm Patterson). QUT members included Barbara Piscitelli, Felicity McArdle and Katrina Weier. Scott Paris (University of Michigan) worked with us to develop our research agenda in 1998.

<sup>2</sup> The Australian Research Council (ARC), QUT, Queensland Art Gallery (QAG), Queensland Museum (QM), Queensland Science Centre (QS), and Global Arts Link (GAL) provided funding for continued research. The expanded QUTMC team for the 2000-2002 project included: QAG - Michael Beckmann, Melina Mallos; QM - Derek Griffin, Robert Ashdown, Kylie Smith, Richard Cassells; QS - Graeme Potter, Paul Parkinson; GAL - Louise Denoon, Malcolm Paterson; QUT - Barbara Piscitelli, Collette Tayler, David Anderson, Katrina Weier and Michele Everett.

For the rest of the year, the children made multiple visits to multiple museums. The project was very satisfying for all involved. Children enjoyed finding new ideas in museums, parents gained new skills in guiding young children's learning, teachers found ways to link the museum with the classroom curriculum and museum staff discovered new strategies for designing programs and projects for the early years audience.

This manual was developed to bring the benefits of our knowledge to others who work with young children, schools and families in museums. The manual is for staff working in museums, and provides a comprehensive set of information to help guide new practices and develop new museum programs for the ever growing young audience. More detailed information about our research project can be found on the QUT Museums Collaborative website:  
<http://www.fed.qut.edu.au/ec/museums/col.html>

This manual is constructed in three parts. The first part focuses on the characteristics of young children and their interest in museums. The second part provides information about how to create and sustain meaningful museum learning experiences for the early years. Finally, there is a section on how museums and schools might create a 'double act' in delivering high quality learning for young children.

Any project of this magnitude reflects the work of many people, and I would like to thank all involved. Special thanks go to Michele Everett and Katrina Weier for their careful attention to the manual and for their hard work in seeing it through to completion.

Barbara Piscitelli  
30 March 2003

# **YOUNG CHILDREN IN MUSEUMS**

## **Learning in museums**

Many people claim that museums are a place for children to have fun, yet museum visitor researchers are well aware that the fun experience often leads to learning outcomes. Learning knows no boundaries, and museums can be considered as a kind of learning landscape for all visitors. If learning is viewed as a process of changes in knowledge, attitudes and values, then museums provide an ideal and provocative learning environment. Learning in museums happens when children connect with an interesting object or experience. The child's prior knowledge and personal characteristics will dictate which items and experiences have strongest appeal. When children make contact with an idea, an object or an experience in a museum, the learning process begins. The initial contact with the museum object is only the start – learning and thinking spans a long period of time and the museum event adds an important layer to the on-going learning process.

## **Young children as learners**

Museums present children with opportunities to learn about the world and to explore new ideas. They are places that encourage children to learn in a way that comes naturally to them – offering opportunities to actively construct meaning, respond to stimulating environments, engage in social interaction, make connections, build on what they know, ask questions, follow their interests and solve problems. Young learners build knowledge and understandings about the world through personal, social and culturally mediated experiences, so museums can play an important role in prompting this kind of learning. Young children come to museums with a wide range of interests and learning preferences, so museum staff must employ diverse strategies to create meaningful experiences and optimal conditions for learning.

### **CHARACTERISTICS OF YOUNG CHILDREN AS LEARNERS**

In the world of museums, young children display a range of characteristics that make them eager, responsive learners. Young children are:

- energetic
- capable
- curious
- active
- multi-sensory
- exploratory
- playful
- full of questions
- full of ideas
- knowledgeable
- communicative
- creative

- independent
- theory builders

## **RESPONDING TO YOUNG CHILDREN'S LEARNING NEEDS**

To provide optimal learning experiences for children, adults who guide young children in museums can apply the following learning-teaching principles.

Programs should be:

### *Child centred*

- The adult guide finds out what learners know and builds on their existing knowledge base.

### *Developmentally appropriate*

- Children's cultural background, age and individual differences are taken into consideration.

### *Responsive*

- Teaching-learning encounters are characterised by dynamic, two-way, respectful exchanges between adults and children.

### *Flexible*

- Multiple entry levels into teaching-learning dialogues and situations allow for children of all ability and skill levels to take part in some way.

### *Play-based*

- Children are encouraged to engage in hands-on, minds-on, self-directed, enjoyable play situations.

### *Empowering*

- Opportunities are provided for children to make choices and be agents of their own learning.

## Young children as visitors

There has been a surge of interest in museum visits with high attendance figures reported in all types of museums and a significant growth in early childhood audiences. Consequently, museums are beginning to view young visitors as an important audience. In the past, few studies have focused on the young child's museum experience. Recent research, however, has provided insights about how young children engage and learn in museums. The following section provides a summary of current understandings about young children as museum visitors.

### **YOUNG CHILDREN'S BEHAVIOUR IN MUSEUMS**

The museum is a novel setting that can be both awesome and overwhelming with lots of nooks, crannies, large interior walls and unusual architectural features. The architecture of the museum space itself is compelling, and for young visitors is more exciting because of the unusual opportunities to explore objects and become involved in activities unlike those at home or school. Children respond in various ways to the novelty of museum exhibits and experiences: with surprise, pleasure, puzzlement, wonder and curiosity.

#### ***Cognitive mapping***

Children often start their museum visit with a period of rushing around and orienting themselves to the space. Following the orientation phase is a period of settling down. During the cycle of activity, children are undertaking a process of 'cognitive mapping' where they explore in a seemingly random fashion – zipping from exhibit to exhibit on a voyage of discovery (Worthington & Paull, 1987, p. 30). After about thirty minutes, children slow down and explore more selectively, purposefully and quietly.

The mapping experience seems to be an important aspect of the children's museum visit, as does the tendency to use a 'start-stop' manner when attending to exhibits. Children literally stop and start, and revisit exhibit areas that interest them (Rennie & McClafferty, 1995). Children do not always interact with exhibits the way in which they were intended when designed by museum staff, but rather follow their own interests and agendas.

#### ***Hot and sweaty***

We began to notice hot and sweaty children in the second year of our research project, during the first term of museum visits. Observing the children so absorbed in their play, with their bodies so fully engaged, led us to search for information about what happens when children behave in this way. From the literature, we found that there are many researchers examining the phenomenon of active learning, and all agree that movements and 'hands-on' enhance the learning process.

The importance of 'minds-on' as well as hands-on engagement of learners is well documented (Ansbacher, 1998; Dewey, 1963; Duckworth, Easley, Hawkins, & Henriques, 1990; Gardner, 1983; Hein, 1996). Rennie and McClafferty (1996) note that, while hands-on activity is equated with perceptual

explorations, for the experience to become meaningful, it must be interpreted with the mind. Hein and Alexander (1998) provide a useful model for examining the learning that occurs as children engage in hot and sweaty activities in museums. Their definitions of *constructivist* and *active learning* highlight the importance of mind-body connections during the process. While engaged in the physical activities associated with learning, children use both their hands and minds to interact with the world. They handle and manipulate objects, experiment, build, solve problems and form conclusions – they are required to “struggle with ideas..., to think” (Hein & Alexander, 1998, p. 38).

The concept of ‘kinaesthetic thinking’ describes the process that occurs during physical learning activities, as children engage using hands, bodies and minds (McKim – cited in Williams, 1983, p. 152). For young children who are highly concrete and sensory learners, kinaesthetic thinking has distinct advantages. Firstly, information taken in through the senses stimulates thoughts about the experience. Manipulation of objects and materials also allows for unexpected discoveries, and engenders a sense of immediacy, actuality and action.

Museum exhibits that allow for bodily engagement, through touching and manipulating, stimulate higher levels of attention-focused behaviour such as questioning and explaining – behaviours that are clearly associated with learning (Dierking, cited in Borun, Cleghorn, & Garfield, 1995). Children reason about things they can touch and into which they can project themselves physically. According to Patterson (1997), the high degree of sensory input offered by tactile and kinaesthetic experiences holds children’s attention, provides a more complete picture of the subject matter and assists with retention of information. The emotional aspect of kinaesthetic experiences also influences retention of ideas presented in museum exhibits. As young children engage in physical activities, they experience feelings such as excitement, anticipation, joy, frustration, empowerment, success and delight. Their bodily action takes on an all-encompassing role, by linking thought with sensory input and emotion (Wright, 2000). A physical and emotional connection with the subject matter increases the memorability of the learning experience.



**Figure 1.** Hot and sweaty in the museum.

Collaborative learning situations are noticeably present during hot and sweaty play activities in the museum. Exploring exhibits in small groups, children work together to achieve a successful outcome – they watch and listen to one another, ask questions, make suggestions, give directions and cooperate to solve problems (Piscitelli, Weier, & Everett, 2003). Each member of the group is responsible for their own actions, as well as assisting others when necessary. In an atmosphere of collaboration, children enter the active play situation in a way that best suits their preferred learning approach and particular strengths. Then, with support and assistance from more skilled peers or adults, they are able to take on more challenging roles within the group. Such active, collaborative play is bound to compel a child's participation. Mann (1996) describes active play in the context of the 'participation hypothesis' – a well established rule of social science in which 'ownership' of an activity grows out of increasing participation, opening the child to new ideas, innovation and learning (p. 449). The more active children are in determining and absorbing their own learning, the more they learn.

## **SPARKING YOUNG CHILDREN'S INTEREST AND MOTIVATION IN MUSEUMS**

In museums, children learn when their interests and motivation are engaged (Csikszentmihalyi & Hermanson, 1995). Several factors influence children's levels of interest and motivation during museum visits: prior knowledge and personal experiences, choice and control, collaboration and communication, and emotions and enjoyment.

### ***Choice and control***

Children benefit in many ways when opportunities for choice and control are incorporated in the museum visit. Young children demonstrate higher levels of motivation when they have choice and control over their learning in museums, and beyond (Sykes, 1992; Paris, 1997). When children can decide what they want to do and how long they will do it, they gain a sense of ownership of the learning process (Falk & Dierking, 2000). Young children feel "successful and competent when they engage in a task that they have defined for themselves" (Sykes, 1992, p. 228). The 'I did it' feeling instils a sense of confidence – a positive experience that the child will want to repeat and share with others.

Many children enjoy taking the lead role in determining the content and direction of a museum visit. After touring adults around an art museum, a 10-year-old child declared, "I had fun. It was nice to be in charge of something for once" (Jeffers, 1999, p. 47). Giving children a say in what they will do and see during a museum visit results in higher levels of enthusiasm and provides children with opportunities for decision-making. In the QUTMC study, sessions were built into the museum visits where 4 – 6-year-old children led tours, revisited their favourite objects and pursued activities of their choosing. These were highly engaging, memorable and meaningful experiences for the children.

### ***Prior knowledge and personal experience***

Children's prior knowledge and experiences influence their levels of interest and motivation during museum visits. Young children demonstrate a higher level of interest in things that make connections to their personal lives (Anderson,

Piscitelli, Weier, Everett, & Tayler, 2002; Piscitelli & Anderson, 2000; Wolins, Jensen, & Ulzheimer, 1992). In the QUTMC study, a 6-year-old boy became very excited when he saw the 'Big Red' kangaroo exhibit during a visit to a natural history museum. When asked why he was so interested in this animal, he said it was because his grandfather demolished his new car after running into a Big Red on the road; he was intrigued to examine the size and posture of the animal in the museum's diorama.

To integrate prior knowledge and personal experience with the museum visit, it is necessary to link visits to home and/or school contexts. This can be achieved by designing visits around topics that relate to children's lives so that they can build new understandings based on what they already know. To enhance learning, it is necessary for the museum experience to be placed in a wider context. Young children should be encouraged to see museum visits as part of their daily life, not as a one-off experience.



**Figure 2.** Children are highly interested in museum exhibits that make connections to their personal lives.

### ***Collaboration and communication***

Children visit museums as part of family and school groups. Studies show that providing children with opportunities to engage in conversations with peers and adults influences their level of interest and enjoyment, as well as the degree to which a museum experience is remembered (Jensen, 1994; Sykes, 1992; Wolins, et al., 1992). Museum visits should capitalise on young children's desire to 'show-and-tell' by designing experiences that encourage the sharing of ideas. As they share ideas, children are able to restructure and refine their theories. Discussion of ideas can also help stimulate one another's imaginations (Paris, 1997). During discussions, adults can raise children's interest levels by asking open-ended questions that encourage further exploration (Paris, 1997).

Opportunities to work in groups can enhance children's motivation levels by providing group members with "a shared goal of learning together" (Paris, 1997, p. 25). Teachers and museum staff can foster social development by designing museum experiences that allow children to share ideas and work/play together. Within a small social group, adults should guide and model learning by engaging children in conversation that stimulates their curiosity.



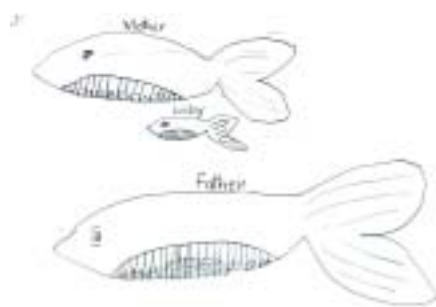
### ***Emotions and enjoyment***

Affective qualities such as attitudes and emotions can influence children's levels of interest and motivation during museum visits (Csikszentmihalyi & Hermanson, 1995; Paris, 1997; Pintrich, Marx, & Boyle, 1993). Highly motivating museum visits are those that allow young visitors to experience a wide range of emotions (Falk & Dierking, 2000). Children are intrinsically motivated during museum visits when the experience is made enjoyable and fun (Csikszentmihalyi, 1997). Providing children with opportunities for play can make museum visits more pleasurable. For children, "often the first step in learning from an exhibit is to have a playful experience with an object or phenomenon" (Perry, 1994, p. 28). Museum staff can offer playful experiences during museum visits by employing strategies such as treasure hunts, role-play and other 'game-like' activities. During these episodes, children express feelings of excitement, anticipation, wonder, discovery, confidence and accomplishment.

### **YOUNG CHILDREN'S MEMORY AND RECALL OF MUSEUM EXPERIENCES**

Young children readily remember their museum experiences, and many studies have documented the potency of children's recall (Coe, 1988; Hein, 1998; Jensen, 1994; Piscitelli & Anderson, 2000, 2002; Wolins et al., 1992). Several factors contribute to children's strong recall, including the emotional and affective context of the event, personal involvement, the frequency of visits and links with the school curriculum and their every day lives (Wolins, et al., 1992).

Young children's most powerful recall of museum exhibits and experiences are of those that link to their life-worlds (Piscitelli & Anderson, 2000). In the QUTMC study of 4 – 6-year-old children's learning in museums, the deeply held passions of young children were their starting points and connecting points in museums.



**Figure 3.** A child's drawing of her memory of the whales at the Queensland Museum.

Children comb museums to locate information, explore ideas, gain knowledge and engage their curiosity about various topics. When they encounter interesting objects and experiences, young children have highly memorable experiences. While studies indicate that young children recall large objects, size is only one of several components that make a difference in memorability for young children (Kindler & Darras, 1997; Piscitelli & Anderson, 2000).

Children also recall exhibit components that involve active participation, such as interactive areas with links to authentic objects (Piscitelli & Weier, 2002; Tuckey, 1992) as well as information presented in the form of a story.

## **SCHOOL AND FAMILY VISITS**

Children behave differently on school visits as compared to family visits to museums (Hein, 1998). On school visits, children tend to follow the classroom script where they listen to the directions of the teachers/museum staff, and work collaboratively in peer social learning groups. However, during family visits, children learn in smaller, more intimate social groups where their personal interests and learning preferences are more likely to be taken into account.

### ***School visits***

School groups make up a large percentage of visitors to museums. Teachers take children on field trips to museums for a variety of reasons ranging from meeting specific learning outcomes to providing the class with an end-of-year celebration. Museum educators would like to see the once-a-year syndrome disappear in favour of regular visits where children pursue ideas generated in their classrooms, centres and homes. Although researchers hold divergent views on the amount of learning that takes place on field excursions, findings from many studies support the view that children do learn on field trips (Anderson, Lucas, & Ginns, 2003; Anderson, Lucas, Ginns, & Dierking, 2000; Falk & Dierking, 2000; Moffat, 1992; Piscitelli, 1991; Price & Hein, 1991; Ramey-Gassert, Walberg, & Walberg, 1994; Taylor, Morris, & Cordeau-Young, 1997).

Six key factors contribute to learning outcomes from school visits to museums: teacher's role, pre-visit orientation, social context, scripts, subsequent experiences and repeat visits.

### **Teacher's Role**

The classroom teacher can influence learning that takes place on field trips in many ways (Wolins et al., 1992). If students know that learning is a desired outcome of the visit, they concentrate more effectively on learning during the visit (Leary, 1996). Consequently, it is important to provide children with opportunities to explore the role of museums as places of learning prior to the visit. The degree to which the museum visit links to classroom learning is another factor that influences learning on field trips. Higher levels of learning (both cognitive and affective) occur when museum experiences link to classroom learning and school curriculum (Gilbert & Priest, 1997; Rennie & McClafferty, 1995; Wolins et al., 1992). Visits that link to other learning also provide children with a more memorable experience (Kindler & Darras, 1997).

### **Pre-visit Orientation**

Orientation is another factor that affects learning outcomes from school visits. Providing children with a pre-visit orientation serves to reduce the 'novelty factor'. Studies show that optimum levels of learning occur when novelty is moderate (Anderson & Lucas, 1997; Balling & Falk, 1980; Burnett, Lucas, & Dooley, 1996; Leary, 1996). When the setting is too novel, children demonstrate more non-task behaviour; when the setting is too familiar, children

have a tendency to become bored. The content of the orientation also affects learning outcomes. Students who receive a 'child agenda' orientation exhibit higher levels of learning (Anderson, 1994; Anderson & Lucas, 1997; Balling, Falk, & Aronson, 1980). A child agenda orientation provides children with information concerning the practical aspects of the visit such as how long the bus trip will take, when and where they will be eating and whether or not they will be allowed to visit the gift shop.

### Social Context

The social context plays an important role in shaping learning on school visits. Studies indicate that adult-child interactions can heighten a young child's learning on field trips (Crowley & Callanan, 1998; Gilbert & Priest, 1997; Weier, 2000). Making sure adults feel comfortable in the role of 'teacher' and that they are knowledgeable about the topic are two factors that influence the amount of learning that results from these interactions. Social interactions with peers can also affect learning on field trips. Museum activities that allow students to interact socially enhance interactions with exhibits – by increasing reading of labels and peer teaching (Tuckey, 1992). Studies show that young children demonstrate higher levels of enjoyment and learning when working in small friendship groups (Gilbert & Priest, 1997; Jensen, 1994).

### Scripts

Standard field trip scripts consist of a welcome experience, tours, programs and worksheets. To date, few school groups receive a satisfactory introduction to the museum, as many welcome experiences consist of waiting around and listening to the rules (Piscitelli, McArdle, & Weier, 1999). Tours routinely consist of a one-way communication from tour guide to children. Research on the effectiveness of tours found that while students who participated in a structured tour achieved higher cognitive gains, those who participated in a less structured tour had positive feelings about the experience (Stronck, 1983). In another study, 8 and 9-year-old children demonstrated higher levels of mental engagement when they followed their own itinerary (Gilbert & Priest, 1997).

Studies investigating programs for children on school visits have identified the following factors as contributing to increasing levels of program effectiveness: 1) including interactive learning experiences, 2) making the most of the unique resources and setting, 3) providing a variety of activities, 4) allowing free exploration, and 5) providing opportunities for social interaction (Price & Hein, 1991). Price and Hein (1991) found programs were more effective when time was allowed for first-hand experience and exploration before the introduction of vocabulary and concepts.

The way in which worksheets are used during museum visits has been shown to affect learning (Price & Hein, 1991). Worksheets can help focus children's attention when used as a free-choice 'seek and find' activity, but can impede learning when used as a compulsory find the 'right' answer task (Griffin & Symington, 1997; Price & Hein, 1991). To date, typical museum scripts have not provided children with conditions to achieve optimal learning (Griffin & Symington, 1997).

### Subsequent Experiences

New understandings of the role subsequent experiences play in the learning process have stimulated a growing body of research in this area (Falk & Dierking, 2000; Hein, 1998). Researchers conclude that subsequent experiences play a vital role in determining the learning that results from a museum visit (Anderson, 1999; Falk & Dierking, 2000; Guichard, 1995; Hein, 1998). Knowledge acquired on a short visit is fragmented unless students are provided with opportunities for further investigation and discussion (Guichard, 1995). Falk and Dierking (2000) argue that subsequent experiences contribute to what an individual ultimately does or does not learn from a museum visit. They believe that “it is only as events unfold for the individual after the museum visit that experiences that occurred inside the institution become relevant and useful” (p. 133). Falk and Dierking go on to say, “subsequent reinforcing events and experiences outside the museum are as critical to learning from museums as are the events inside the museum” (p. 140).

### Repeat Visits

Repeat visits increase levels of learning in students of all ages, “but particularly for early elementary school aged children” (Balling & Falk, 1980, p. 235). Because the excitement level of young children visiting museums is very high, the first visit can serve to reduce the novelty factor so that children can focus on content matter on subsequent visits (Balling & Falk, 1980). Young children benefit from repeat visits in other ways. In a study of young children’s visits to an art museum in the United Kingdom, children demonstrated increased levels of confidence in stating and holding opinions over the course of a repeat visit program (Lockett, 1982). Multiple visits also strengthen children’s memories of museum visits (Wolins et al., 1992).

### ***Family visits***

Family groups make up a large percentage of visitors to museums (Dierking & Falk, 1994) and, consequently, there is a growing body of research in this area (e.g., Borun et al., 1995; Dierking & Falk, 1994; McManus, 1994). Families visit museums for a combination of social and educational reasons (Kropf & Wolins, 1989). Visits to museums provide families with opportunities to make personal connections, discuss family histories and develop a shared understanding (Dierking & Falk, 1994; Hein, 1998). Children prefer to visit museums in family groups – apparently due to their sense that they have more control over what to see and the pace of the family visit (Jensen, 1994).

### Profile of family visits

A typical family visit consists of the following four phases: an orientation phase (3-10 minutes); followed by an intense exhibit viewing phase (25-30 minutes); followed by an exhibit ‘cruising’ phase (30-40 minutes); and a final ‘preparation for departure’ phase (5-10 minutes) (Dierking & Falk, 1994).

Dierking (1989) claims that there are two basic learning styles exhibited by families at museums – guided collaborative learning or independent learning. Guided family learning occurs when families stay together during museum

visits. Parents ask questions and select galleries. Independent learning families split up and check in with each other periodically. Learning can result from both styles of family learning, however, research suggests that many family groups need guidance on how to “acquire and construct knowledge about museum objects and exhibits” (Kropf & Wolins, 1989, p. 77).

#### Factors that influence family learning

The amount of learning that takes place on family visits is influenced by many factors. Parents play a crucial role in determining learning outcomes from family visits and hold different perceptions about the nature of their role during a museum visit (Gelman, Massey, & McManus, 1991). Some parents view their role as teacher; others do not. Parents demonstrate varying degrees of comfort levels when it comes to guiding children’s learning in museums (Farenga & Joyce, 1998). The extent to which the parent sees him/herself as a teacher can enhance or inhibit cognitive processes and can, therefore, impact children’s learning in museums.

Parents also affect learning by influencing the amount of time the family spends interacting with an exhibit. Studies investigating family interaction with exhibits found a high correlation between time spent in front of an exhibit component, verbal interaction by family members and children’s level of recall (Cone & Kendall, 1978; Crowley & Callanan, 1998). Factors identified as influencing family learning include: prior knowledge and experience, individual and group agendas, gender and age of parents and children, and when the exhibit is visited (Dierking & Falk, 1994).

# CREATING AND SUSTAINING MEANINGFUL MUSEUM EXPERIENCES

Museums are unique and exciting places of learning – ideal venues to accommodate the eager and curious nature of young children. The challenge for museum staff is to make the most of this unique environment to create and sustain meaningful museum experiences for young audiences.

## Characteristics of meaningful museum experiences

### PROVIDES EXPERIENCE WITH REAL OBJECTS

Young children enjoy and profit from experiences that cater for their needs as concrete, multi-sensory learners. The museum environment, with its collection of interesting, rare and diverse objects, gives children the opportunity to have first hand experience with 'the real thing'. Seeing genuine museum objects close-up offers children the chance to gain insights that may not be available through simply hearing about these objects out of context, or seeing reproductions in books and on postcards.



**Figure 4.** Handling real objects at the Queensland Art Gallery.

Museum objects that can be touched are excellent resources for making concepts come alive for young children. Handling objects may help to increase children's interest in unfamiliar or challenging concepts (Pitman-Gelles, 1981). Sometimes museums use replica specimens as resources for children to touch. In this case, staff should communicate the difference to children, and take the opportunity to explain the importance of protecting original artefacts for future generations. Whether original objects are displayed for viewing at close range, or real or replica items are offered for handling, children gain a great amount of information by using established ways of 'questioning objects', just as museum research and curatorial staff do when identifying and cataloguing artefacts (Talboys, 1996, p. 108). In questioning objects in the museum, young children

may observe, explore and discuss size, shape, colour, texture, weight, condition, smell, materials and method of construction.

### **PROMOTES INTEGRATED LEARNING**

Visits to museums with young children are an excellent way to inspire collaborative project work in the classroom, promoting integrated learning (Burnaford, Aprill, & Weiss, 2001; Katz & Chard, 2000). Particular exhibits encompass topics and concepts that children will want to investigate in depth across a range of curriculum areas. If projects have commenced prior to a museum visit, the museum offers an authentic context for purposeful and meaningful learning, where children can find answers to questions they have about the topic. Museums also provide an excellent resource for children as they work towards the completion of 'rich tasks', which can be pursued in collaboration with museums ([http://www.qsa.qld.edu.au/yrs1\\_10/](http://www.qsa.qld.edu.au/yrs1_10/); [http://education.qld.gov.au/corporate/newbasics/html/about/about\\_rt.html](http://education.qld.gov.au/corporate/newbasics/html/about/about_rt.html); <http://education.qld.gov.au/corporate/newbasics/html/richtasks/richtasks.html>).

### **OFFERS MULTI-SENSORY AESTHETIC EXPERIENCES**

As young children examine artefacts, they naturally engage whatever senses seem appropriate to process information about the object's qualities. Museums offer many opportunities for children to experience through the senses, and thus promote children's aesthetic awareness as they appreciate, perceive and enjoy the museum environment and its objects (Abbs, 1989; Dewey, 1934).

Hands-on manipulation and playful experimentation with museum exhibits allow children to use their senses and bodies as tools for learning. Through engagement with the museum and its objects, children use their sensory tools as ways of getting to know about the ideas incorporated in exhibitions. For example, museums are alive with a range of interesting auditory, kinaesthetic and visual phenomena for children to investigate and analyse. All types of museums employ multi-sensory exhibits and engaging opportunities so children can participate more fully in the concepts inherent in exhibits.

- At the natural history museum, behind-the-scenes tours to see how animal specimens are preserved and stored can be a very memorable experience for young children because of the novelty and the multi-sensory opportunities to get up close to the work of the museum.
- Social history museums provide many opportunities for understanding the past, and may offer dressing up in period costume and exploring concepts through role-play with props from the 'olden days' as valuable multi sensory learning experiences.
- In art museums and object centred museums, the visual sensory experience can be very powerful, involving mind, emotions and senses (Mallos, 2002). Some art museums offer a broad range of special exhibitions for young children and families, incorporating hands-on, multi-sensory experiences in both studio and gallery environments.



**Figure 5.** Behind-the-scenes tours offer multi-sensory experiences.

## **PRESENTS OPPORTUNITIES FOR EMPOWERMENT AND SELF EXPRESSION**

For young children, the museum represents a place full of interesting objects and experiences, about which they will have many comments and questions. Adults often feel they have to interpret objects and information, reach conclusions and answer all the questions that arise during a museum visit. However, young children are natural philosophers who, when given time, encouragement and support, are very capable of making meaning from their encounters with the world (Lipman, Sharp, & Oscanyan, 1980). Children can take a leading role as a museum guide; the process empowers them and provides opportunities for self-expression (Sloan, 2001). Rather than providing a lecture on the object, adults may want to follow children's interests, listen to their interpretations, and extend their thinking by engaging children in further discussion about objects, experiences and artworks in museums.

## **ENCOMPASSES A DIVERSITY OF LEARNING APPROACHES**

Young children come to museums with a range of preferred learning styles. For example, while one child may learn most effectively through linguistic activities, another might prefer spatial tasks, and yet another may learn best through kinaesthetic experiences (Gardner, 1983). Museums are well suited to cater for such diversity, as they present many different options for engagement and learning. There are opportunities for looking, talking, recording, investigating, comparing, asking questions, problem-solving and theorising. Many museums also offer opportunities for handling objects, dramatic play, experimentation, construction and art-making.



**Figure 6.** Museums cater for a diversity of learning approaches.



When encouraging children to respond to museum objects and exhibits, awareness of their preferred learning styles is important. Davis and Gardner (1993) describe different strategies, or 'windows', which may help young children to enter a discussion at a personally meaningful level. The *experiential* window, or 'hands-on' approach, invites children to touch, manipulate or respond using bodily movements; the *narrative* window allows children to experience an object through the medium of story; and the *aesthetic* window focuses on having children describe the visual and aesthetic qualities of the object encountered.

### **ENCOURAGES COLLABORATION AND GROUP WORK**

Museums are dynamic learning places where children and adults share thoughts, feelings, observations and understandings about ideas contained in exhibits and objects. Young children learn as they watch and listen to others, work collaboratively to solve problems, discuss their ideas and ask questions. Familiar, interested adults are particularly important for scaffolding children's learning in collaborative group situations, as they can create a comfortable and supportive environment for experimental play and deeper investigation (Vygotsky, 1978; Weier, 2000; Centres for Curiosity and Imagination, 2002). Familiar adults (such as parents and teachers) play an important role as models of appropriate learning behaviours and problem solving strategies. In recent years, there have been many innovations in effective museum exhibition design and interactive displays to accommodate multiple users in multigenerational learning circles (Borun & Dritsas, 1997). Working in a small group with a familiar adult as a conversational partner, young children can learn to verbalise their ideas and develop important collaborative learning skills as joint investigators of the world.



**Figure 7.** Young children learn as they work collaboratively.

# Programming

Public programs make museums accessible to school and family groups. The best programs have objectives designed for sustainability – by building and supporting community-school-family partnerships that encourage continuity of learning within the various contexts in children’s lives (Kropf & Wolins, 1989; Piscitelli et al., 1999; Schaefer & Cole, 1990). Table 1, following, presents a detailed checklist of factors to consider when designing museum programs for young children.

**Table 1**

*Programming Checklist*

<b>1. Museum Programming</b>	
1.1	Public education programs and facilities are provided.
1.2	Trained staff and volunteers are available to guide groups of visitors.
1.3	The roles and responsibilities of the adults involved in the program are clearly defined.
<b>2. Programming by Schools and Families</b>	
2.1	In the process of preparing for a museum visit, the teacher/adult has contact with the venue.
2.2	Children are prepared with pre-visit activities, and post-visit activities are planned as follow-up.
2.3	Links are made with the school curriculum and key outcome statements (in the case of school visits).
2.4	Qualified and/or responsible adults are arranged to accompany children, at the recommended adult-child ratio.
2.5	Adequate time is allowed for all aspects of the visit.
2.6	Opportunities are provided for multiple and repeat visits.
<b>3. Touring Guidelines</b>	
3.1	The visit begins with an introduction to the venue, as quickly as possible after entering the museum.
3.2	The guide is prepared to follow children’s interests and capitalises on teachable moments.
3.3	The guide establishes a rapport with the group, through quality interactions and an informal, conversational style.
3.4	The tour group is kept small, appropriate to the ages of the children.
3.5	Discussion of exhibits begins within children’s comfort zone and moves to less familiar topics/concepts.
3.6	The guide ensures that all group members can see the exhibit and are included in discussion.
3.7	Time spent on detailed examination and exploration of exhibits is varied over the duration of the tour.
3.8	Touring segments are varied to include active participation, discussion, reflection and child-selected experiences.
3.9	Adult facilitated experiences include demonstrations, storytelling, object centred

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activities and mini-lectures.

- 3.10 The guide uses vocabulary that can be clearly understood by children, defining technical terms where necessary.
- 3.11 The guide takes cues from the children to determine the amount of time spent at individual exhibits.
- 3.12 Touring segments are no longer than 45 minutes (or less for very young children).
- 3.13 The guide is aware of time during the tour.

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#### **4. Touring Resources and Strategies**

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- 4.1 Hands-on materials.
  - 4.2 Props.
  - 4.3 Strategies for evoking non-verbal responses.
  - 4.4 Games.
  - 4.5 Storytelling.
  - 4.6 Visual thinking strategies.
- 

Adapted from Weier, K. (2000).

### **CHILD-CENTRED PRINCIPLES**

During both the planning and implementation phases of programming in museums, a range of factors will ensure young visitors' encounters in museums are worthwhile and positive.

Programs should allow children to experience:

#### *Purpose*

- Children see purpose in, and reward from, being involved in the museum program.

#### *Inclusion*

- Children are willing and able to participate in the museum program, because it is compatible with their interests, prior knowledge and learning abilities.

#### *Choice*

- Individuals use options that enable choice and control over their own learning, based on personal interests and motivation.

#### *Ownership*

- Children have a natural interest in the museum venue, and feel confident and competent in navigating their way around.
- Children take leadership roles (e.g., touring).

#### *Engagement*

- Opportunities exist for active participation and genuine involvement in work and play activities.
- Children engage in experiences with both objects and people in the museum.

### *Identity*

- Group identity is forged through opportunities for involvement in group tasks, group problem solving and group decision-making.

### *Time*

- to go deeper into areas of individual interest,
- for reflection, and
- for self expression (thinking, talking, moving, drawing).

### *Use of multiple senses*

- Opportunities exist for hands-on/minds-on involvement in learning experiences, and for full-body engagement.

### *Fun!*

## **EXPERIENCES**

School and family visits can be enhanced by structuring experiences before, during and after the visit, which maximise learning opportunities.

### ***Before the visit***

Before the visit, museums can provide support by encouraging families and schools to become familiar with the museum and its collections, and by providing links to the school curriculum.

- Encourage schools and families to become familiar with the museum and its collections prior to the visit.

When teachers and parents/carers orient themselves to the museum prior to the visit, higher learning outcomes may result. Museums can encourage teachers/carers to become familiar with the museum prior to their visit by offering orientation workshops and preview sessions. During these workshops, museum staff can introduce the museum and its collections and train teachers/carers how to make the most of their visit.

Museum experiences may be enriched by introducing children to the museum before the visit. Children can meet and interview museum staff in their classroom. Curators, scientists, education staff and administrators have valuable contributions to make to children's understanding of the place and work of museums in contemporary society. In the QUTMC study, a curator of Indigenous art visited the classroom before the museum visit, enabling children to gain hands-on experience with Indigenous art and artefacts, and to hear stories about Australian Indigenous culture. When the children arrived at the art museum and saw a range of Indigenous artworks and objects, they were able to place the experience within a wider context.



**Figure 8.** A curator introduces children to Indigenous artefacts in the classroom, prior to a visit to the art museum.

Museum collections are another resource that may be used to foreground children's museum experiences. Research suggests that exposing children to museum collections before the visit can enhance learning during visits (Falk & Dierking, 2000). Consequently, museums should offer ways that help children become familiar with museum objects prior to the museum visit. This can be accomplished in a number of ways. Museum web sites can provide opportunities for children to enter the museum by taking them on a virtual tour, exploring the many different galleries. Many museums offer loans kits of items from the museum collection for classroom and centre use. Having museum objects in the classroom can make a lasting impression on young children. Providing children with opportunities for direct hands-on contact with museum objects increases levels of interest and stimulates discussion in preparation for the visit.



**Figure 9.** Children become familiar with an animal specimen from the history museum, prior to their visit.

- Provide links between museum visits and school curriculum

Many teachers are unaware of the potential museum visits have to complement classroom work (Talboys, 1996). In order to enhance museum visits, teachers need to be equipped to use museums in a way that capitalises on young children's learning. With background knowledge, teachers can better understand how to reinforce learning from museum visits by integrating the museum experience across the curriculum. Many museum educators are currently providing teachers with written information to help facilitate museum-school connections. Museums can also assist teachers by providing pre-visit

packages (via mail or the web) that contain information about procedural matters, suggestions for pre and post-visit activities, as well as information about the exhibits. Communication between schools and museum professionals is essential when designing field trip experiences to match curriculum needs (Stec, 1993).



**Figures 10 & 11.** Children create and test spinning tops in the classroom to explore 'How Things Move', prior to a visit to the Queensland Sciencecentre.

### ***During the visit***

For children to get the most out of a museum visit, new models for visits should be adopted. In general, visits for young children should be short: less time, more frequently, is better than more time on a single visit (Higbe, 2000). The museum visit should stimulate or deepen children's interests (Griffin & Symington, 1997). First-time visitors may want to spend time investigating the features of the building before they focus on the interesting objects housed in it. Familiarity with one's environment is important, and some children may require the sense of security that comes from an awareness of the building.



**Figure 12.** A volunteer guide welcomes a group of preschoolers to Global Arts Link.

The 'welcome experience' sets the tone for the visit. A friendly staff member should meet visitors and help them set the scene for the day's outing. The museum staff may provide information about the layout of the building, relevant amenities and the schedule of events. Museums should provide school groups with a welcome experience that:

- makes children feel welcomed and comfortable,
- seeks information about the children's knowledge and expectations,
- reminds children of expected behaviour and the purpose of the visit and,
- informs children about the day's schedule and procedural matters such as eating and toileting.

Currently, museums offer a variety of programs for young children. Experiences that encourage learning:

- offer variety – structured activities, semi-structured activities, free-choice child and adult-led tours,
- engage children in active participation,
- are multi-sensory,
- provide opportunities for choice and control,
- are developmentally appropriate,
- provide opportunities for social interaction, and
- present information in a way that builds on what children already know.

There is an endless range of possibilities for programming for young children's museum visits. Scripts can include: tours, activity room programs, theatre shows, in-gallery talks, in-gallery games, drawing, empowerment and reflection sessions. Children often take time to assimilate new ideas, and a carefully planned museum program will offer them the chance to absorb new concepts slowly through thought and action.

### Tours

Different kinds of tours can be designed to enhance young children's museum visits such as orientation, behind-the-scenes and child-guided.

- **Orientation tours** provide time for young children to become familiar with the space and serve to reduce the novelty effect.
- **Behind-the-scenes tours** give children an opportunity to see that there is much more to a museum than what they see on the floor. Many museums offer options for visitors to meet staff and see their working environments, to view collections, to see workshops and laboratories and to use libraries and databases.



**Figure 13.** Behind-the-scenes tour at the Queensland Museum.

- **Child-led tours** provide children with opportunities to be in charge. Children enjoy holding the floor and speaking about objects in museums. In this empowered position, children make excellent guides for small peer groups or within a family context. If child-led tours feature favourite objects and provide ample time for children's floor talks, the results can reveal the depth of their personal interests and emotional connections with museum collections.



**Figure 14.** Orientation in the Whale Mall at the Queensland Museum.



**Figure 15.** A child shows his family visitors an overhead exhibit during a child-led tour at Global Arts Link.

Determining a suitable pathway through a museum can be an interesting challenge. Different strategies may be used depending on the group size and type of tour. In some cases, parents and teachers may want to make a random tour in which children's interests lead the way through the museum. At other times, the adult may want to introduce children to a particular exhibition of special interest to them.

Additional strategies for increasing opportunities for learning on tours include:

- keeping group size small (Piscitelli, 1991, Price & Hein, 1991),
- structuring tours in a way that allows children to follow their own questions and interests (Griffin & Symington, 1997; Jensen, 1994),
- training guides to use conversational language and listen to children's responses (Piscitelli, 1991), and
- encouraging guides to make tours a sensory experience, by providing objects that relate to the museum exhibits that children can touch or smell (Shaffer, 1999).

If group sizes are small during museum tours, the adult can document the children's reactions with photographs, video or audiotapes so that later on, at home or in class, children may review and reflect on their visit.



### Activity room programs

Activity room programs can provide children with opportunities for choice and control. They can be set-up to allow children to investigate topics in depth at their own pace and according to their individual interests and learning preferences. In the QUTMC project, activity room programs were set up at the Queensland Museum for children to explore natural environment and cultural heritage displays. The room was divided into discovery areas that included investigation work where children used microscopes and handled specimens and artefacts, and into creative expression areas where children could dress-up, engage in imaginary play or draw.



**Figure 16.** Handling 'olden days' artefacts in an activity room at the Queensland Museum.

### Theatre shows

Theatre shows can be an effective way of presenting information to young children. Because of the setting, theatre shows can heighten children's interest levels and pique curiosity (Anderson, Piscitelli, Weier, Everett, & Tayler, 2002). Theatre shows can range from facilitator-led demonstrations to child-led performances. The theatre shows used during the QUTMC project were very memorable experiences for the children. Some shows were traditional slide shows with compelling narrations given by passionate presenters, while other shows were demonstration-based with an expert presenter in the spotlight. Theatre experiences will be as diverse as the collections and staff in the site, but they should always be well timed and well organised for the early years audience.



**Figure 17.** 'Unexpected Science' theatre presentation at the Queensland Science Centre.

Strategies for increasing opportunities for learning during theatre shows include:

- pacing the show to be quick but not hasty,
- providing hands-on/minds-on engagement,
- providing a balance between observation time and involvement,
- structuring the show to tell a story,
- selecting topics that are relevant to the children's lives,
- providing multi-sensory connecting points,
- inviting children's questions,
- training staff to become comfortable with the content of the presentation, and
- training staff to deliver content at an appropriate level.

### In-gallery talks

In-gallery talks increase children's engagement with exhibits. Facilitator-led talks can be memorable experiences for children especially when presented in the form of a story. Because children are familiar with storytelling in home and school settings, stories can be an effective way of communicating with young children. Storytelling experiences can be used in a diversity of situations – one on one, small group or large. Storytelling teaches children to read images and objects, and helps bring images and objects to life. In-gallery talks also provide children with a chance to listen to new ideas, to hear an expert discussing the importance and history of an object and to gain new concepts about the items on display. They also provide children with opportunities to feel, express and discuss a wide range of emotions, such as empathy, sadness, care and disgust.



**Figure 18.** In-gallery talk with a small group of preschoolers at Global Arts Link.

Strategies for facilitators that will increase learning opportunities during in-gallery talks include:

- putting yourself in a position where all children can see and hear,
- seating the children (for groups of more than eight),
- projecting your voice,
- showing passion and knowledge for the topics and objects,
- making connections with children's own lives,
- presenting a range of stories: subject matter, event, technique,
- empowering the children to answer questions,
- focusing the children's attention on the object,

- using props if they seem to be helpful to the children's understanding – props provide examples of the quality of the object and assist with making connections within the children's experience range, and
- raising questions for the children to answer using clues from the object:
  - Who do you think is the bad guy and how can you tell?
  - Look at the girl's skirt. What does that tell you about her?
  - How do the people look – are they happy or ...?
  - What colours are they wearing?
  - Where are they going to go now?
  - What happens when your toy breaks? Will someone fix it?

### In-gallery games

When possible, museum staff should incorporate elements of play and opportunities for exploration into visits. 'Seek and find' games provide a focus for activity and add an element of play to the visit. Fun activities increase children's motivation and interest levels (see Resources 1 - 9, for examples of in-gallery games used in the QUTMC research project).

### Drawing

Providing opportunities for children to draw in museums enhances the visit in many ways. As they draw, children can relax and express themselves creatively. Drawing can also extend and refine children's observation skills, slowing them down so that they take a closer look at the museum and its objects.



**Figure 19.** In-gallery drawing at the Queensland Art Gallery.

### Empowerment

Museum staff should build personal empowerment sessions into museum visits. Children feel empowered when they are in charge of their own discoveries and learning, and when provided with choices about their tour of the site. In the company of their peers and in the presence of adult guides, young children can search through the museum to locate and explore objects and activities of their own choosing. Museum staff may want to find ways of including a layer of children's interpretation throughout the site, in such things as labels for and by children, tours selected by children, treasure hunts designed by children, and children's guides.

### Reflection

Providing children with opportunities to reflect on their museum experiences can serve to reinforce and extend learning that occurred during the visit. Reflection can occur as an individual, small or whole group experience. It is important to provide schools and families with a quiet place to sit and discuss their visit.



**Figure 20.** Children reflect on their visit to Global Arts Link during a discussion with a member of staff.

### ***After the visit***

Just as museum readiness forms an important element in the success of the visit, follow-up activities and discussions contribute greatly to its value and worth to children. Post-visit experiences should enable children to extend learning after the visit (Bitgood, 1991; Piscitelli, 1991; Sykes, 1995). Children leave the museum with new ideas and with a richer understanding of life and culture, which can be stimulated further in various ways (see Appendices A & B for examples of children's post-visit writing and drawing).



**Figure 21.** Following a visit to Global Arts Link, where they viewed an exhibition of works about aircraft, a group of preschoolers built their own plane and engaged in imaginative play.

Museums can provide school and family groups with take home materials that provide suggestions for follow-up activities (see Appendix C for examples of 'Takeaway Sheets' created for parents visiting the children's gallery at Global Arts Link). Children should also be encouraged to make return visits with their class and families (Sykes, 1995; Piscitelli, 1991). Repeat visits provide children with opportunities to develop a personal relationship with the museum.

Evaluation is an essential part of the programming process. Feedback from museum staff and participants is required to assess program effectiveness. Therefore, strategies for evaluation (i.e., questionnaires, comment books or discussions) should be developed during the program planning process, used during implementation, and used again at the end of the visit to appraise the efficacy of the activities.

## RESOURCES

Developing resources that enhance young children's museum experiences can be challenging. The key is to provide children with resources that stimulate curiosity and creativity. Resources can take many forms, including interactive booklets, treasure hunt cards and drawing activities (see Resource section for examples of resources used in the QUTMC research project). The following checklist (Table 2) offers questions to keep in mind when designing and developing resources.

Table 2

### *Resource checklist*

	Does it focus children's attention?
	Does it encourage looking closely?
	Will it increase children's interest level?
	Does it provide opportunities for empowerment?
	Does it allow children to explore their own interests at their own pace?
	Does it provide opportunities for children to interact with peers and adults?
	Does it provide information about the exhibition for adult guides?
	Does it provide adult guides with suggestions for thought-provoking questions & purposeful discussion?
	Does it offer hands-on experiences?
	Is it geared to the children's level?
	Is it visually appealing?
	Is it fun?

## STRATEGIES FOR INTERACTING WITH YOUNG CHILDREN

The potential of the objects and experiences offered at museums largely depends upon the adults who guide and support young children's visits to these venues. Consequently, adults who guide young children in museums should be trained to use high quality interaction strategies to support children's involvement, enjoyment and learning in the museum environment.

A range of behaviours, from non-directive, through scaffolding, to directive behaviours is appropriate during adult-child teaching-learning interactions (see Table 3, following). At the non-directive end of the continuum, behaviours such as physical proximity, making casual comments, encouraging children and modelling learning strategies can be employed effectively within the museum context. At the next level, focusing attention, suggesting, explaining, hypothesising, questioning and posing problems are useful strategies for challenging children and extending their current levels of functioning. More directive behaviours, including demonstrating, instructing and task analysis,

allow adults to direct children's learning within narrowly defined dimensions of error, to ensure successful completion of a task.

**Table 3**

*Interactive Teaching-Learning Behaviours*

Category	Behaviours
<b>Non-directive</b>	<p><i>Physical proximity.</i> Close physical proximity between the adult and child/children provides security for children, enhances conversation and increases viewing time.</p> <p><i>Listening.</i> Careful attendance by the adult builds a climate of acceptance of the children and their ideas.</p> <p><i>Acknowledging.</i> A genuine response by the adult shows children they have been heard and keeps them engaged in an activity.</p> <p><i>Commenting.</i> The adult's casual comments help to create a relaxed atmosphere and comfortable level of interaction for the children.</p> <p><i>Encouraging and Praising.</i> The adult's positive responses inspire children's confidence to explore or continue with a task.</p> <p><i>Modelling.</i> The way the adult communicates, experiments and approaches and solves problems, forms a powerful model for how children will behave.</p>
<b>Scaffolding</b>	<p><i>Reinforcing.</i> The adult positively emphasises a particular concept or behaviour.</p> <p><i>Facilitating.</i> The adult provides children with appropriate assistance or materials.</p> <p><i>Focusing attention.</i> The adult draws children's attention to a particular aspect.</p> <p><i>Answering.</i> The adult provides feedback in reaction to children's inquiries.</p> <p><i>Describing.</i> The adult helps the children to become aware of details or characteristics.</p> <p><i>Providing information.</i> The adult expands the children's experience and knowledge.</p> <p><i>Explaining.</i> The adult helps the children to construct meaning.</p> <p><i>Reading.</i> The adult exposes children to details, technical information or new vocabulary.</p> <p><i>Recalling.</i> The adult remembers facts or experiences in order to encourage children to make associations.</p> <p><i>Suggesting.</i> The adult puts forward an idea for consideration by the children.</p> <p><i>Initiating.</i> The adult begins a task or line of thinking that children can follow.</p> <p><i>Philosophising/ Hypothesising/ Imagining/ Wondering.</i> The adult speculates in order to stimulate children's curiosity and encourage further exploration, experimentation and questioning.</p> <p><i>Prompting.</i> The adult provides cues that encourage the children to think divergently.</p>

	<p><i>Questioning.</i> The adult uses open-ended questions that encourage children to explore, imagine, reason, interpret, choose and evaluate.</p> <p><i>Clarifying.</i> The adult asks the children to confirm, explain or justify their ideas, opinions or preferences.</p> <p><i>Posing problems.</i> The adult encourages the children to explore solutions.</p> <p><i>Challenging.</i> The adult increases the difficulty of a task as children gain competence and understanding.</p> <p><i>Co-constructing.</i> Adults and children collaborate to form meaning and build knowledge about the world.</p>
<b>Directive</b>	<p><i>Demonstrating.</i> The adult shows the children how something is done, in order to help them acquire that skill or behaviour.</p> <p><i>Instructing.</i> The adult passes information on to the children, or tells them how to perform a skill.</p> <p><i>Directing.</i> The adult guides the children's behaviour in a step-by-step fashion, in order to assist successful task completion.</p> <p><i>Task Analysis.</i> The adult helps children identify the key steps involved in completing a task, in order to enable successful completion of the task.</p>

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Adapted from Weier, K. (2000).



**Figure 22.** Adult facilitating preschoolers with an interactive experience at Global Arts Link.

### **Vocabulary**

An important function of adult-guided interactions is the introduction of technical or specialised vocabulary.

- In the art museum, adults may model ways of talking about art and focus children's attention on certain aspects of works, describing and explaining how these were achieved, using appropriate language. They can also describe and demonstrate artistic processes during studio activities, and challenge children to use technical language in their own descriptions of artworks and artistic processes (Weier, 2000).
- In the history museum, adult guides should use language that matches the young child's level of development. When talking to young children about history, it is better to use the phrase 'a long time ago' than to give specific dates and eras (Vukelich, 1984).

- Visits to science centres provide young children with opportunities to build on understandings of scientific principles. Meaning-making is assisted when new concepts are introduced by providing examples that make connections to the child's world. Science instruction should include modelling of scientific reasoning and use of explicit scientific language (Osborne, 1995).

### **Art Vocabulary**

*Colour:* names, dark, light, bright, dull, cool, warm, tone, tint, shade

*Line:* straight, wavy, jagged, curved, long, short, thick, thin

*Shape:* round, square, oval

*Size:* big, medium, small

*Texture:* smooth, lumpy, rough, soft, prickly

*Artwork:* artist, title, medium

*Techniques:* painting, drawing, sketch, print, photograph, textile, sculpture, carving, construction, installation

*Styles:* abstract, realistic, life-like

*Paintings:* portrait, still life, landscape, cityscape, seascape

*Composition:* foreground, background, middle ground

### **History Vocabulary**

*Cultural Heritage:* artefact; culture, craft; outback; transport, machines; history, long ago, in the past

*Natural Environment:* specimen; model, original, replica; fossil, skeleton, bones; research; natural resources; environment, ecosystems, habitat; species, native, introduced; endangered, extinction, protection, stewardship; problem, pollution, habitat destruction; predator, prey

### **Science Vocabulary**

*Science & Society:* working scientifically, investigate, experiment, describe, problem-solving, technology, invention

*Earth & Beyond:* air, weather, clouds, landforms, planet, earth, space, moon, stars

*Energy & Change:* movement, motion, speed, weight, forces, magnetism, electricity, sound, light

*Life & Living:* characteristics, classification, grouping, food, shelter, reproduction

*Natural & Processed Materials:* solids, liquids, texture, density, volume

## **Questions**

Questioning is one of the most common interaction strategies employed by adults during teaching-learning dialogues with young children. In museums, questioning provides an effective way to encourage close viewing of exhibits, develop children's ideas and facilitate interpretation of objects and experiences. Questions can also be used to acquire a sense of children's existing knowledge about a topic, in order to make subsequent questions more relevant and to challenge children's thinking. Different types of questions are used for different purposes:

### Closed questions

- encourage identification and description of characteristics, following observation
- easy, fun questions; effective during initial 'naming games' to engage children in guided viewing

Examples: *What colour is the bus in this picture? How many circles can you see? Who can find a lamington in this artwork? Can you see a very dark shade of blue?*



### Analysis questions

- seek a reasoned response, based on what has been observed

Examples: *What makes this look like it is a night time scene? What is the biggest and the smallest thing you can see in this artwork? What makes this painting look crowded?*

### Open-ended questions

- demand imaginative thinking and inferences
- encourage multiple answers; no 'correct' answer

Examples: *Why do you think the artist painted the forest in such dark colours? What would it feel like to be in this busy park? Why do you think the artist painted this picture?*

### Evaluative questions

- encourage child to formulate an opinion, based on what they know about an object or topic
- offer opportunities for complex analyses

Examples: *Did the artist do a good job on this artwork? What makes you think so? Which painting makes you feel happy/sad? Why?*

- ♦ **Different types of questions are used for different purposes.**
- ♦ **Focus on eliciting *personal responses* through *open-ended* questions.**

**Ensure a *balance* of questions is used.**

### ***Casual conversation***

The use of casual conversation during museum experiences contributes to a comfortable, effective style of interaction between adults and young children. Informal conversation is a particularly important learning mechanism within family groups in the museum context. Young children's interpretation of meaning is assisted by older family members, who share with them a foundation of background experience and are attuned to their unique learning styles, interests, views, attitudes and biases (Schauble, Beane, Coates, Martin, & Sterling, 1996). For instance, when a child makes a personal or imaginative response to an exhibit in the museum, parents often clarify the response in relation to an experience that occurred elsewhere and build upon it to extend the child's understanding.

#### **10 ways to approach a museum exhibit with young children**

1. Ensure all children in the group can see the exhibit and hear the discussion
2. Crouch to children's level
3. Allow time for children's spontaneous responses
4. Accept all responses positively and build discussion from children's interests and comfort zone (from familiar to less familiar)
5. Maintain an informal conversational style
6. Use appropriate questioning techniques (open-ended)
7. Encourage close observation and description of the exhibit
8. Elicit personal responses and stories
9. Model ways of responding
10. Use topic-specific vocabulary

# Physical design

Appropriate physical design of a museum venue and its exhibits ensures an environment that is conducive to the learning, enjoyment and comfort of all visitors, including young children. A range of factors should be considered when designing the physical environment, including spatial organisation and provision of facilities such as seats, eating areas, drinking water and restrooms, as well as specific exhibit characteristics. Table 4, following, presents a detailed checklist of features that can be used as a guide for designing museum environments and exhibits with young children as audience.

**Table 4**

*Physical Environment Checklist*

<b>1. Building</b>	
1.1	The entrance to the venue is visually welcoming, able to accommodate large groups of visitors and clearly signposted to assist visitors in finding their way.
1.2	The environment provides a balance between organized, predictable spaces and areas of exploration and discovery.
1.3	Different exhibition areas are clearly defined and adequately separated in order to minimise distractions.
1.4	The space is arranged to enable individual, small and large group participation.
1.5	The space is arranged to avoid safety hazards.
1.6	The environment is non-threatening.
1.7	Facilities are provided to cater for children's physical needs (nourishment, toileting, rest).
<b>2. Exhibits</b>	
2.1	A balance is provided between interactive exhibits and static exhibits.
2.2	Exhibits cater for a variety of interests, ages, learning styles, degrees of knowledge, experiences and skills.
2.3	Exhibits and interpretation are multi-sensory.
2.4	Exhibits allow for vigorous play.
2.5	Exhibits and interpretation promote discussion and provide opportunities for group problem solving.
2.6	Exhibits provide a range of learning opportunities (psychomotor, social, affective or cognitive goals), and consider a variety of modes of learning (visual, auditory, tactile and kinaesthetic).
2.7	Exhibits encourage repetition of activity and application of the skills or concepts presented.
2.8	Exhibits stimulate visitors' natural curiosity and spark their motivation to explore.
2.9	Exhibits have personal utility and meaning for visitors.
2.10	Visitors are given opportunities to make choices and control their experiences.
2.11	The goals of exhibits are clear and manageable, allowing for self-directed behaviour.

- 
- 2.12 Exhibits provide opportunities to receive feedback on actions performed.
  - 2.13 Exhibits present information in a manner that is comprehensible to both adults and children.
  - 2.14 Exhibits are physically accessible to a variety of visitors.
  - 2.15 The content of exhibits is sensitive to the diversity of cultural, religious and gender groups in society.
  - 2.16 Exhibits are durable.
  - 2.17 Exhibits are safe and well maintained.
  - 2.18 Exhibits are regularly evaluated.
- 

Adapted from Weier, K. (2000).



**Figure 23.** This popular ScienceSpot exhibit is multi-sensory, stimulates curiosity, allows for self-directed behaviour and provides feedback on actions performed.

# Evaluation and research

Young children's experiences in museums can be enhanced by increasing evaluation and research efforts. The line between evaluation and research is sometimes blurred. Although standard research processes and methods are used in both evaluation studies and research, the difference lies in the study's primary objective. The primary objective of an evaluation study is to assess and improve program or exhibition effectiveness, whereas the primary objective of research is to increase the body of knowledge for a wider audience (Munley, cited in Hooper-Greenhill, 1994).

There are many different research processes and methods that may be employed in museums. Quantitative studies analyse data via numbers and statistics, using techniques like door counts, surveys and questionnaires. Qualitative studies attempt to describe and interpret human behaviour and attitudes, and include case studies and program evaluation.

While there is consensus among museum professionals that additional evaluation and research is required to improve the visitor's experience, to date few museums have formal evaluation and/or research programs in place. By supporting evaluation and research efforts, museum professionals will gain valuable insights about the young visitor that can be used to improve young children's museum experiences.

The next section provides a brief overview of the evaluation process.

## **EVALUATION STUDIES**

Like all research, evaluation studies require a detailed plan of action. The evaluation process involves six steps:

- Step 1 – Preparation*
- Step 2 – Design*
- Step 3 – Data Collection*
- Step 4 – Data Analysis*
- Step 5 – Reporting*
- Step 6 – Action*

### **Step 1 – Preparation**

During the preparation stage, evaluation objectives and questions are set. You need to be able to provide answers to the following questions:

- What is to be evaluated?
- Why?
- What do you want to find out?
- Do you want to measure demographic, socio-economic and/or participation characteristics, or do you want to assess attitudes, beliefs and understandings?

- Do you want to appraise the quality of the new program, its design, impact on audience or sustainability?
- How do you intend to use the answers to the questions?

## **Step 2 – Design**

During the design stage, the following questions are addressed:

- When will the study be conducted?
- Who and how many people will be sampled?
- What data collection methods will be used?

### When will the study be conducted?

Evaluation studies can be categorised according to when the study takes place.

*Front-end analysis* – Front end analysis is conducted during the exhibition or program planning stage. Its primary purpose is to determine the intended or potential audiences' knowledge, attitudes and beliefs as they relate to exhibition or program issues (Dierking & Pollock, 1998).

*Formative evaluation* – Formative evaluation (also referred to as process evaluation) is conducted during the early stages of the implementation of the exhibition or program. Its primary purpose is to assess impact and provide direction and guidance for the work in progress.

*Summative evaluation* – Summative evaluation (also referred to as outcome evaluation) takes place after the exhibition has opened or the program has been completed. Its purpose is to evaluate the exhibition or program's success.

### Who and how many people will be sampled?

*Question:* Who will you sample?

*Answer:* Sample the people who will best provide answers to the evaluation study's questions. For quantitative studies, an attempt should be made to get a representative sample of the population to be investigated. This is best achieved by the use of random sampling techniques. Qualitative studies may use purposive sampling, selecting participants for a particular reason or purpose (Sarantakos, 1998).

*Question:* What size sample do you need?

*Answer:* It depends on the study's design and questions. Generally, larger sample sizes are appropriate to quantitative analysis. Qualitative studies usually focus on a smaller number of respondents to generate exploratory and descriptive detail to provide a rich description of the research setting. Resources and staff available to collect data can also impact the sample size.

### What data collection methods will be used?

A number of data collection methods can be used in evaluation studies (see Table 5, p. 48). There are strengths and weaknesses associated with each method such as time, cost and personnel required. When selecting data collection methods, it is important to choose the method/s that will best answer

the study's questions. The level of trustworthiness of a study's findings can be increased by using more than one method to collect data – a process known as triangulation of data.

Data collection methods fall into three main categories: 1) observations, 2) interviews, and 3) written sources.

### *Observations*

Behavioural observations of visitors are commonly used in evaluation studies. Observations can take the form of tracking visitor movements and/or recording actions and conversations (using audio, video, photographic and/or paper and pencil). Observational protocols have been developed by researchers specifically for the use of studying young children's experiences in museums (Borun & Dritsas, 1997; Speering, Rennie, & McClafferty, 1997). Rennie and McClafferty's 'Rug Rat Rating' (see Appendix D) has been used to assess young children's cognitive, affective and psychomotor outcomes, as well as rate exhibit effectiveness. Children's behaviours are observed and recorded in one of three categories: takes notice, interacts, or uses purposefully. Social interactions between visitors are recorded by placing arrows to indicate the nature of the interactions.

### *Interviews*

Interviews have been used as primary data sources in many studies investigating young children's learning in museums (Borun, Chambers, & Cleghorn, 1996; Cone & Kendall, 1978; Guichard, 1995; Stevenson, 1991). The study's aims and design determine the participants, type of interview, location and timing. Interviews can be structured, semi-structured or open-ended.

Special requirements are needed when conducting interviews with young children. Interviews should be unstructured and conducted in informal, familiar settings (Hatch, 1990). The importance of the interviewer establishing rapport with the young child before conducting the interview is well supported in the literature (Hatch, 1990; Piscitelli et al., 1999). The following strategies have been suggested to improve the quality of interviews with young children:

- strive to build equal roles,
- accept children's views – do not look for a 'right' answer,
- avoid using questions that contain abstract ideas,
- use aids such as concrete objects, photographs, and/or video, and
- frame questions in a clear and uncomplicated manner (Hatch, 1990).

Even though there are difficulties associated with interviewing young children, getting the child's perspective is critical to the process of understanding young children's learning in museums (Kindler & Darras, 1997; Piscitelli & Anderson, 2000).

Focus groups are a type of interview commonly used in evaluation studies. Focus groups bring together a small group of people for a discussion. The interviewer typically asks group members open-ended questions and probes

answers to elicit in-depth responses. This strategy is very effective in gathering information from small groups of school children, and in family group contexts.

#### *Written data sources*

Questionnaire surveys are another data collection method frequently used in evaluation studies. It is important to pilot questionnaires to make sure that each question is interpreted the way in which it was intended. Questionnaires can be used with adults and/or children, but need to be designed with a specific audience in mind. For example, in the QUTMC study, a 'Child Focused Survey' in booklet format was developed to assess 4 and 5-year-old children's perceptions of museums. The booklet was used as a way to link the interviewing process to something with which the children were familiar, that is, 'reading' a book. The booklet was designed with picture images to accommodate young children's reading ability (see Appendix E).

Children's drawings can also be used to evaluate the impact of museum experiences (Coe, 1988; McClafferty & Rennie, 1997; Piscitelli & Anderson, 2000; Strommen, 1995). Children's drawings have been used for a variety of purposes. In the QUTMC study, children's drawings were used as a way of gathering information about young children's perceptions and memories of museums as well as a way to engage children in a dialogue about past museum experiences. Young children's drawings have also been used to evaluate exhibit effectiveness (Coe, 1988). The success of using young children's drawings as an assessment tool depends on the study's aims, objectives and method of analysis.



**Figure 24.** A child's drawing showing detailed recall of a museum exhibit.

#### *Other written sources*

Participant journals and comment cards are other written data collection tools that can be used in evaluation studies (see Appendix F for example of Parent Diary entry from QUTMC study).

After data gathering methods have been selected, the next step is to develop the tools or instruments. The instrument design process can be collaborative in nature and usually entails a number of revisions and refinements. This is also the point in the process where data gathering equipment is secured and tested.

**Table 5**  
*Data Collection Techniques*

<b>Technique</b>	<b>Description</b>	<b>Uses</b>
<b><i>Interviews</i></b>	<ul style="list-style-type: none"> <li>discussions with visitors (structured, semi-structured or open-ended)</li> <li>individual or group</li> <li>audio or video taped</li> </ul>	<ul style="list-style-type: none"> <li>gain detailed information</li> <li>assess visitor perceptions of exhibit/program</li> <li>assess visitor understanding of content presented in exhibit/program.</li> </ul>
<b><i>Focus Groups</i></b>	<ul style="list-style-type: none"> <li>discussion with small group, led by moderator</li> <li>audio or video taped</li> </ul>	<ul style="list-style-type: none"> <li>gain insights and assess attitudes and reactions</li> </ul>
<b><i>Observations / Running Records</i></b>	<ul style="list-style-type: none"> <li>detailed observation recording behaviour and/or situation over an extended period of time</li> <li>continuous description, including direct quotation of utterances</li> </ul>	<ul style="list-style-type: none"> <li>identify use of exhibit/ program components</li> <li>assess levels of engagement, enjoyment</li> <li>identify processes, use of vocabulary, scaffolding, peer tutoring, social interactions, etc.</li> </ul>
<b><i>Anecdotal Notes</i></b>	<ul style="list-style-type: none"> <li>less detailed than a running record, but preserves the <i>essence</i> of what occurred</li> <li>single, significant episode (or series of episodes)</li> </ul>	<ul style="list-style-type: none"> <li>complement/supplement other data sources</li> </ul>
<b><i>Tracking &amp; Timing</i></b>	<ul style="list-style-type: none"> <li>recording visitor movement over a period of time</li> <li>timed interactions with people and/or objects</li> </ul>	<ul style="list-style-type: none"> <li>assess time spent and movement through exhibition</li> </ul>
<b><i>Audio Taping</i></b>	<ul style="list-style-type: none"> <li>recording of verbal utterances and interactions</li> </ul>	<ul style="list-style-type: none"> <li>capture child and adult language, interaction patterns, questioning techniques and vocabulary</li> </ul>
<b><i>Video Taping</i></b>	<ul style="list-style-type: none"> <li>recording of behaviour</li> </ul>	<ul style="list-style-type: none"> <li>capture child and adult behaviour; time spent interacting with exhibits</li> </ul>
<b><i>Photographs</i></b>	<ul style="list-style-type: none"> <li>pictorial representations</li> </ul>	<ul style="list-style-type: none"> <li>capture dynamic nature of environment</li> <li>record what was not easily described</li> <li>'zoom-in' on children's behaviours/learning processes</li> </ul>
<b><i>Questionnaires / Surveys</i></b>	<ul style="list-style-type: none"> <li>written questions (can be qualitative and quantitative in nature)</li> </ul>	<ul style="list-style-type: none"> <li>gather demographic information</li> <li>assess level of understanding</li> </ul>
<b><i>Comment Cards</i></b>	<ul style="list-style-type: none"> <li>books or cards for visitors to write comments about their museum experience</li> </ul>	<ul style="list-style-type: none"> <li>provide insights into likes and dislikes</li> </ul>
<b><i>Participant Journals / Diaries</i></b>	<ul style="list-style-type: none"> <li>journal/diary kept by participants (parents/ children/teachers) over a period of time</li> </ul>	<ul style="list-style-type: none"> <li>gain information about feelings and attitudes</li> </ul>
<b><i>Children's Drawings</i></b>	<ul style="list-style-type: none"> <li>creative expression of ideas and memories</li> </ul>	<ul style="list-style-type: none"> <li>evaluate recall, impact and understandings</li> </ul>

Adapted from Weier, K. (2000).



### **Step 3 – Data Collection**

At the beginning of the data collection stage, evaluation procedures are piloted on a small number of people to make sure the data collection instruments will provide answers to research questions. Once the protocols and procedures have been finalised, data collectors need to be trained. Issues concerning ethical clearance (privacy and confidentiality) and informed consent (agreement of all participants) must be addressed.

#### **Data Collection Tips**

Things to consider when gathering data in the museum:

- noise/crowd levels
- multiple perspectives
- staff/time requirements
- location/logistics
- visitor willingness
- developing a rapport with participants
- level of researcher participation (*observer – participant*)
- researcher fatigue

### **Step 4 – Data analysis**

Data analysis can be on-going and occur throughout the study or take place at the end of the study. Data analysis consists of consolidating and organising the data in a way that provides answers to the study's questions. Quantitative analysis consists of 'number crunching' and can be facilitated by using computer programs such as spreadsheets or SPSS (Statistical Package for the Social Sciences). Qualitative techniques consist of coding data and looking for emergent themes. A number of studies adopt a mixed methods approach (McClafferty & Rennie, 1997; Piscitelli & Anderson, 2000; Stevenson, 1991).

### **Step 5 – Reporting**

In the reporting stage, a report is written and the findings are disseminated to interested parties. Reports should be written with the intended audience in mind. Try to get your work published in museum journals if you think other institutions could benefit from learning about your study's findings. Museum conferences and meetings are other places to spread the news about your findings.

### **Step 6 - Action**

The action phase of the study ties back to one of the questions you addressed in Step 1: How do you intend to use the answers to the questions? Now that you have the answers you were looking for, how will you go about implementing change?

# SUPPORTING SCHOOL PROGRAMS

## Establishing partnerships

By establishing partnerships, museums, schools and communities can create a new educational infrastructure for young children (Falk & Dierking, 2000).

Successful partnerships include:

- collaborations between parents, teachers and museum staff,
- teachers and parents on museum boards and committees,
- museum personnel as consultants to schools,
- reference groups to cater for the early years audience requirements,
- active parent participation in museum learning, and
- flexibility in museum and school schedules (Landau, 1986).

Productive partnerships involve a shift in thinking: “school officials, including teachers, must be willing to accept museums as partners in the educational process; and museum officials, including curators, must recognise that serving the schools and children is an integral part of the museum’s function” (Danilov, 1976, p. 306). These new partnerships will be fundamentally important in creating sustainable programs for schools and communities (Piscitelli, 2001).

## The double-act

Successful museum staff deliver children's programs with active involvement and participation of schools and families. In essence, museum staff and adult carers (e.g., parents and teachers) who work best together perform a kind of 'double-act', with each sharing special knowledge and expertise to ensure best outcomes for children. Museum staff have expert understandings of their collections and exhibitions, so they play a vital role in bringing the visitor into contact with objects and experiences that will ignite and sustain interest. Though this information is interesting to children, it is probably best delivered and provoked by adult carers who know the children on personal terms.



**Figure 25.** Museum staff supporting the teacher during a pre-visit classroom session.

The double act involves museum staff setting up clear communication with adult carers to find out what the children know, why they are coming to the museum, what ideas are under investigation and other pertinent details (e.g., duration, adult-child ratio, group size). At the time of booking an excursion, museum staff should gather brief notes from teachers about the young visitors' special interests and specific booking arrangements. Following the booking, the group should receive a letter of confirmation from the museum; this provides a good opportunity to make relevant suggestions about classroom preparations.

Teachers, parents and accompanying adult carers play an important role in facilitating social situations where children can discuss, interpret and question their ideas in one-on-one and small group situations. Because they know children's interests, life experiences and learning styles, parents and teachers make connections between the museum experience and the children's lives. Museum staff should provide information to prepare the adults for the visit, including a set of tips for making the visit meaningful to their group.

At the museum, museum staff and adult carers should play roles suited to their expertise: teachers and parents should direct children's behaviour and offer guided small group interpretations; museum staff should provide the welcome experience and special information about the collection. When museum staff and adult carers share responsibility for guiding children's learning in the museum, the results can be very positive for all involved.

## Excursion options

In an ideal world, young children would come to museums as a regular part of their learning program. Collaboration between schools and museums is becoming increasingly evident, especially in small communities where children are within walking distance of cultural institutions like libraries, museums and galleries. In these cases, schools and museums have favourable conditions for building sustainable multiple visit programs and long-term partnerships to foster children's learning.

Unfortunately, most schools restrict the number of excursions children may undertake in a year, so it is more likely to find single visits to museums as standard in the early years. Even so, it is possible to build strong links between the children's learning in the classroom and the extension of ideas through the museum and its collections.

In this section, we outline three different ways to organise for museum visits:

- Excursion Plus (web visit, staff outreach and site visit),
- Multi-visit (multiple visits to one museum), and
- Multi-visit / Multi-museum (multiple visits to different sites).

### **EXCURSION PLUS**

In schools where field trips are difficult to implement or opportunities are limited, the Excursion Plus program provides children with a way to reap the benefits of a repeat visit program with a single museum visit.

The Excursion Plus program consists of a single museum visit enhanced by a number of pre and post-visit experiences. There is no one best way for these programs to be structured. Models should be tailor-made to meet the needs and resources of individual schools and communities.

Excursion Plus programs should begin by assessing children's interests and examining the curriculum requirements – looking for places where they intersect. No matter who initiates the program, the museum or the school, collaborative planning between teachers and museum staff can help insure the program's success. There are endless possibilities of topics to be explored – incorporating all areas of the curriculum including art, history and science. Topics for Excursion Plus programs can range from broad studies of Indigenous culture or museums, to narrow studies of such topics as dinosaurs or light. Although the majority of the program occurs in the classroom, museum staff may play a central role during all stages of the program.

The three stages of the Excursion Plus program are:

- Pre-visit experiences
- Site visit
- Post-visit experiences

### ***Stage 1: Pre-visit experiences***

Pre-visit experiences are designed to introduce children to the museum and its collections before the visit. Young children may become familiar with museum objects and museum staff prior to the museum visit in a number of ways including the use of museum web sites, museum resource kits and classroom visits by museum workers.

#### Web visit for teachers

Museum web sites provide teachers with a wide range of information online. Pre-visit materials include strategies for linking the visit to the curriculum and real life experiences, pre and post-visit activities, suggestions for enhancing learning opportunities during the visit, information concerning exhibits, as well as procedural matters to follow during the site visit.

#### Web visit for children

Some museum web sites provide children with opportunities to familiarise themselves with the museum's collections and galleries – by presenting virtual tours of public spaces and collection materials. Web sites should be designed to include a way for children to have their questions answered by museum staff.

#### Resource kits

Loan programs are an excellent way for children to become familiar with museum work and museum objects prior to the visit. Kits can relate to specific exhibitions or general museum work. Kit components may include real specimens and artefacts and be designed to provide children with opportunities for hands-on, multi-sensory exploration.

#### Classroom visitor

Outreach programs are another way of bringing the museum into the classroom. Museums can arrange to have artists, curators, preparators and/or educators take their 'act' on the road. Having real museum workers in the classroom can be a very exciting and memorable experience for young children.

Pre-visit experiences should build on one another and include introductory as well as follow-up activities that incorporate discussion, investigation and activity.

### ***Stage 2: Site visit***

Ideally, teachers and museum staff should communicate before the site visit to discuss the content and itinerary for the visit. This way, everyone knows what to expect and museum staff can provide a program that meets the group's expectations. When teachers have done sound preparation for the visit, museum staff will want to build on this base to make the most of the children's experience at the museum.

In order to prepare for the visit, museum and school staff should consider the following elements: training, script, documentation and evaluation.

### Training

Before the visit, adult guides should be trained to use high quality interaction strategies to support children's involvement, enjoyment and learning in the museum environment (see Table 3, p. 38).

### Script

Scripts for school visits should adhere to the following guidelines:

- Welcome experiences set the stage for the visit. Museum staff should avoid launching into a rehearsed presentation about the museum. Rather, the session should start with exploring the children's understandings of the site and its collections.
- A brief orientation tour will help children to become familiar with their surroundings.
- Tours and programs should be designed to allow children to experience a variety of activities – multi-sensory, hands-on, reflective and behind-the-scenes if possible.
- Group size should be kept small whenever possible. Teachers can help by grouping children prior to the visit – use age as a way of determining group size (3 three-year-olds, 4 four-year-olds, 5 five-year-olds and so on, up to a maximum of 8 in a group). This ensures everyone can hear and be heard in the group, and provides manageable groups for touring.
- Time should be permitted for children to follow their own interests and for their questions to be answered. Twenty-minute cruises should be part of the scheduled program to give children time to take the lead in the process of discovery and exploration of the museum.

### Documentation

Museum staff and teachers can document children's museum experiences by taking photos, anecdotal records, video and audio recordings. Gathering evidence of children's learning can be used to evaluate programs and extend learning opportunities back in the classroom. Museum staff may use such records as a way of analysing program and design effectiveness.



**Figure 26.** A classroom wall display documents children's learning, following a visit to the Queensland Museum.

### Evaluation

The evaluation process is essential to improve program effectiveness. Getting feedback from teachers will help you to assess how well you are doing and where improvement can be made. Consequently, evaluation forms should be developed and made available to teachers as well as other adult chaperones.

### **Stage 3: Post-visit experiences**

Post-visit experiences contribute greatly to the visit's value and worth to children. Museums and schools can provide children with opportunities to extend the learning by engaging them in follow-up activities and discussion.

### Follow-up activities

- Museum staff can provide schools with suggestions for follow-up activities. Activities can take the form of art, drama, music, writing, construction and/or play.
- Provisions can be made to answer children's queries on email.
- Teachers can involve children in projects such as caring for a collection or setting up their own class or home museum.
- Museum staff can make a post-visit trip to the classroom. The purpose of the visit can be educational – to build on learning that occurred during the visit, or for pleasure – to attend a culminating experience such as the opening of a classroom museum, or play or festival.

The Excursion Plus model provides children with a wide range of opportunities to discover the wonders of museums: exploring web sites, examining real objects, meeting museum staff and visiting a museum. By working together, museums and schools can create valuable partnerships that can result in providing unique and meaningful learning experiences for children.

### **MULTIPLE VISITS TO ONE MUSEUM**

In small communities where there are cultural sites within walking distance, museums may want to invite classes to attend on a regular basis. Multiple visit programs should be planned collaboratively by the museum staff and class teacher to provide sequential experiences that advance curriculum goals.

### ***CASE STUDY: Multiple visits to a local art-social history museum***

The multiple visit program involving Roderick Street Preschool (4 and 5-year-old children) and their local art-social history museum, Global Arts Link (GAL), took place over the course of one year, or four school terms. The first term was devoted to in-class preparation for the museum visits that would occur over the subsequent three terms. The first term curriculum unit, 'What is a museum?', was developed in response to the children's existing level of knowledge and experience of museums, which was quite limited. Topics covered included *what does a museum look like, different kinds of museums, who works in a museum, learning from objects and what is a collection*. As a culminating activity, the children set up their own mini-museum within the preschool and invited their

families to attend (see Resources 10, 11, 12 and 14 for examples of resources used for this experience).

Having developed in Term 1 a sound understanding of the world of museums, the aim for the children in Term 2 was to experience the museum environment first hand – its people, objects and operation – and to develop a sense of wonder, ownership and belonging in this new environment. Focus was primarily on the art content of the museum. Introductory experiences included orientation, behind-the-scenes tours and free-choice exploration of the interactive children's gallery space. Later, the children were introduced to a general exhibition, with a strong multi-media and hands-on component. On the third visit the children engaged in more structured experiences, including whole class guided viewing and discussion of an artwork. In small groups they viewed a general exhibition, which was strictly 'hands-off'.

During each of the three visits in Term 2, ample time was allowed for conversation and reflection, when children had the opportunity to express their ideas and feelings and ponder their experiences. The opportunity to draw in response to museum objects and experiences was also an important component of the program. Museum visits were supported by three in-class sessions, to prepare for and follow-up on the children's museum-based experiences. Areas of focus during these sessions included touch/no touch 'rules' with regard to artworks and objects, artistic vocabulary and visual literacy skills, art making practices, familiarisation with artworks from the museum's exhibitions, and consideration of appropriate behaviour in the museum environment.



**Figure 27.** In class, children became familiar with artworks from the museum's current exhibitions by completing jigsaw puzzles.

The Term 3 curriculum consisted of two visits to GAL, supported by three in-class sessions, with the aim of consolidating the children's Term 2 art-based experiences and introducing the social history content of the museum. New exhibitions were toured and familiar ones revisited, and both structured and free-choice activities were offered. Special guests were utilised to present a 'live' show at GAL as a novel means of introducing local social history topics to this young audience. The presentation included opportunities for the children to take part in demonstrations, and later the preschoolers performed 'on stage' as part of the proceedings.





**Figure 28.** Live demonstration at Global Arts Link by local boxing identities.



**Figure 29.** Hands-on opportunities for children to explore social history during the demonstration.

The final term of the school year again consisted of two visits to GAL, supported by three pre/post-visit in-class sessions. The principal aim of this term was to 'hand over to the children', considering the level of experience and museum knowledge they had developed over the course of the year. Thus, in addition to exploring and enjoying new and familiar areas and exhibitions, the children prepared to lead their own tour for a special family guest. This involved selecting four favourite objects displayed at GAL and creating a 'My GAL Tour' sheet by drawing or using a photograph of these objects of interest (see Resource 15). On their final visit, the children were empowered to lead their guest around the museum, using their tour sheet as a prompt to describe their selected objects.

Parental and family involvement was not only a feature of the children's final visit, but was an extremely vital component of the multi-visit program over the course of the year. Due to local regulations, this young age group required supervision at a ratio of one adult to two children. Parents and grandparents were consequently enlisted as valuable support persons during in-gallery encounters and were significant in shaping the children's museum experiences. From their involvement, parents reported that they had learned a lot and developed a great deal in their confidence to discuss museum objects and artworks with their children. They were also delighted with the results of the multi-visit program for their children, commenting on the children's confidence in the museum environment, their high interest and motivation levels, development of 'museum vocabulary' and understanding of appropriate behaviour for that environment.

**Table 6**

*Global Arts Link Visit Itineraries*

Visit 1 (Term 2 of school year)

- **Welcome** – Staff welcomes class and provides overview of the visit. [10 minutes]
- **Orientation: Walk-through and Iconic objects** – Members of staff tour children through the museum (in two groups of 12), to familiarise them with the total environment. Discussion centres on 'iconic' objects throughout the museum, including social history and art objects. [10 minutes]
- **Children's Gallery: Beary Tales Exhibition** – Children engage in free-choice interactions and explorations of this interactive exhibition space. Small groups of four are accompanied by one or two adults (teacher, parents, grandparents). [30 minutes]
- **Morning Tea / Toilet Break** [30 minutes]
- **Behind-the-scenes Tour** – Members of staff tour children to 'behind-the-scenes' areas (in two groups of 12). Children visit the Collections Storage area, and the major exhibition space where a new exhibition is being installed. [15 minutes each area]
- **Reflection** – Regroup as whole class. Children share their experiences and impressions of GAL in a brief whole class discussion. [10 minutes]

Visit 2

- **Orientation** – Children are welcomed to GAL by staff and volunteers and given a brief overview of the schedule for their visit. [5 minutes]
- **CyberCultures Exhibition** – Free-choice exploration of this multimedia exhibition in small groups of four accompanied by one or two adults. Includes hands-on experiences and opportunities for children to draw in response to the exhibition. [45 minutes]
- **Morning Tea / Toilet Break** [30 minutes]
- **Children's Gallery: Beary Tales Exhibition** – Children re-visit this interactive exhibition space. Includes group story, followed by free-choice exploration and reflection time for class discussion. [30 minutes]

Visit 3

- **Orientation** – Children are welcomed to GAL by staff and volunteers and given a brief overview of the schedule for their visit. Children present class book of plane drawings to staff and volunteers. [10 minutes]
- **Guided Viewing Experience** – Whole group discussion of large artwork ('Kombie'), led by GAL staff member. Focus on visual literacy and aesthetic appreciation. [10 minutes]
- **Octane & Spotlight on Mike Rossow Exhibitions** – In groups of four with accompanying adults, children explore two exhibitions (a collection of themed images about the local air force base, and images by a local contemporary artist). Includes opportunities for children to draw in response to the artworks, and conversation-starters for adults to use in eliciting dialogue about the works. [30 minutes]
- **Morning Tea / Toilet Break** [30 minutes]
- **Choosing Favourites** – Children are asked to choose their favourite object, artwork or area of GAL and to discuss the reason for their choice. They are then photographed with their item of choice, as a 'keepsake' and 'memory' for later in-class discussion. [30 minutes]
- **Reflection** – Regroup as whole class. Children share their experiences and impressions. [5 minutes]

Visit 4 (Term 3 of school year)

- **Orientation** – Children are welcomed to GAL by staff and volunteers and given a brief overview of the schedule for their visit. [5 minutes]
- **Guided Viewing Experience** – Whole class discussion of an installation from the *Retro Chic* exhibition, led by GAL staff member. Focus on visual literacy and aesthetic appreciation. [15 minutes]
- **Retro Chic Exhibition** – Detective work and free-choice exploration in small groups of four with accompanying adults. Includes puzzle pieces to match to artworks and conversation-starters for adults to use in eliciting dialogue about the artworks. [30 mins]

- **Morning Tea / Toilet Break** [30 minutes]
- **Free-choice Touring and Drawing** – In small groups of four with accompanying adults, children explore exhibitions of their choice. Paper and pencils provided for drawing. [30 minutes]
- **Reflection** – Regroup as whole class. Children share their experiences and impressions. [5 minutes]

#### Visit 5 [focus on social history]

- **Orientation** – Children are welcomed to GAL by staff and volunteers and given a brief overview of the schedule for their visit. [5 minutes]
- **Floor Talk by Special Guests** - Local identities, Noel and Lance (former boxers) give a demonstration and talk to the children about activities they performed in the building (Town Hall) before it was a museum. Includes hands-on involvement by children and opportunities for the children's questions. [20 minutes]
- **Treasure Hunt** – In small groups of four with accompanying adults, children use picture and word clues to locate various objects and areas of historical significance within GAL. [30 minutes]
- **Morning Tea / Toilet Break** [30 minutes]
- **Stage Performance** – The class performs a song on the 'stage', for staff, volunteers and accompanying adults. Includes an interactive display and discussion, led by member of GAL staff, about the various uses of the stage when the building was the Town Hall. [10 minutes]
- **Free-choice Touring** – In small groups of four with accompanying adults, children explore exhibitions of their choice. [20 minutes]
- **Reflection** – Regroup as whole class. Children share their experiences and impressions. [5 minutes]

#### Visit 6 (Term 4 of school year)

- **Orientation** – Children are welcomed to GAL by staff and volunteers and given a brief overview of the schedule for their visit. [5 minutes]
- **Guided Viewing Experience** – Whole group discussion of an artwork from the *Ready, Set...GO!* exhibition, led by GAL staff member. Focus on visual literacy and aesthetic appreciation. [10 minutes]
- **Ready, Set...GO! Exhibition** – Free-choice exploration of this exhibition, in small groups of four with accompanying adults. Includes drawing in response to artworks and the opportunity for children to have a photo taken with their favourite artwork. [40 minutes]
- **Morning Tea / Toilet Break** [30 minutes]
- **Children's Gallery: Beary Tales Exhibition** – Children re-visit this interactive exhibition for free exploration time. [30 minutes]
- **Reflection** – Regroup as whole class. Children share their experiences and impressions. [5 minutes]

#### Visit 7

- **Orientation** – Children are welcomed to GAL by staff and volunteers and given a brief overview of the schedule for their visit. [5 minutes]
- **'My GAL' Guided Tours by Children** – Children take their special visitor/s on a guided tour of GAL, using their 'guide sheet' containing four favourite artworks/objects to be viewed. [45 minutes]
- **Morning Tea / Toilet Break** [30 minutes]
- **Children's Gallery: Draw Me a Story Exhibition** – Free-choice exploration and interaction. Regroup for whole class reflection time, including children telling their version of the story of Lottie Angel (the local identity on whom the children's gallery is based and named after), based on information gathered throughout the year of visits to GAL. [30 minutes]
- **Farewell** [5 minutes]

## **MULTI-VISIT / MULTI-MUSEUM**

In schools where the teaching staff has a sound commitment to learning outside of school settings, the museum offers a site for unparalleled learning. Although most multi-visit programs reported in the literature are to a single site, multi-visit programs to multi-museums do exist (Gladfelter, 2001) and can provide children with an unlimited range of opportunities to support learning across the curriculum.

### ***CASE STUDY: Multiple visits to multiple museums (3 + 3 + 3)***

The multi-visit/multi-museum program used in the QUTMC study took place over the course of one school year. The program consisted of a pre-visit classroom-based curriculum followed by a series of museum visits – each with pre-visit and intervening lessons. Although the children participating in the study made nine museum visits (three visits to each site – art museum, science centre and history museum), the number of visits and activities used in a multi-visit/multi-museum program can be adapted to meet the needs of your visitors and your institution.

During the initial stage of the multi-visit planning process, the QUT team met with participating teachers and museum staff from three schools and three museums. Teachers were asked to identify topics that would integrate museum visits with classroom work. An overview document for topics to be covered in Term 1, to prepare children for their subsequent three terms of museum visits, was also developed. This document identified specific links between Term 1 topics and the school curriculum (see Appendix G).

#### School-based sessions

In Term 1, three classes of Year 1 children were introduced to the world of museums through a series of classroom lessons. The lessons were developed cooperatively between the research staff, museum staff and the classroom teacher. The following topics were selected for the first five lessons (see Appendix H for sample lesson plan):

- Lesson #1    What is a museum?
- Lesson #2    What do museums look like (inside & out)?
- Lesson #3    Who works in a museum?
- Lesson #4    How do we learn from objects?
- Lesson #5    What is a collection?

A wide range of supporting resources and activities were used to explore these themes, including books, postcards and cut-out images of museum workers, as well as role-play, drawing and hands-on contact with museum specimens and artefacts (see Resources 16 - 19). Museum staff played an important role during the Term 1 sessions by supplying resources and making visits to the classroom.

Classroom visits by museum staff provided children with a better understanding about museum work, and an opportunity for staff to establish a personal relationship with the children prior to the first museum visit. Museum staff visits also served to stimulate discussion and increase children's levels of interest in

preparation for the visit. Curators, scientists, education staff and administrators have valuable contributions to make towards fostering children's understanding of the place and work of museums in today's society.

The museum objects brought into the classroom were central to telling the story of museum work and made a lasting impression on the children, as noted by their comments during the interviews conducted after completion of the Term 1 curriculum. Objects brought into the classroom included fossils, preserved animals, 'olden days' toys and artefacts, science puzzles and reproductions of paintings.

Following the first five sessions of Term 1, in which content knowledge was introduced, two sessions were devoted to the planning and set-up of a mini-museum in the classroom. Children brought an item from home and readied it for display in their classroom museum following the process of: select, research, prepare and display. Families and museum staff attended the classroom museum opening where the children acted as greeters, security personnel and tour guides. Children enjoyed taking the leading role as 'experts', explaining their objects to the adult visitors.



**Figure 30.** Mini-museum in the classroom.

### Science Centre Visits

In Term 2, the children visited the Queensland Sciencecentre on three separate occasions. Prior to the first visit, the children received a pre-visit lesson that included an explanation of the purpose for the visit as well as an overview of the schedule of events. During this session, children composed a list of 'rules' to follow during the visit. The pre-visit session was child-focused and provided children with advanced organisers intended to increase learning outcomes.

#### Visit #1

Upon arrival for the first visit to the Sciencecentre, a member of the staff greeted the children. Shortly after the group was welcomed, the class was split into smaller museum 'buddy' groups. Buddy groups consisted of four or five children with an accompanying adult. A Sciencecentre volunteer explainer was assigned to each group. Because many adult chaperones are not equipped

(and/or do not feel comfortable) to answer children's questions, the explainers were there to provide support when the inevitable question, 'How does it work?', was asked. The groups went on a brief orientation tour that featured iconic exhibits, along the way interacting with the exhibits, their peers and accompanying adults (see Resource 20, for example of guide sheet used).



**Figure 31.** Volunteer guides accompanied each buddy group as they toured the Sciencentre.

After a morning tea break, the class was divided into three groups. Staff led the groups on a behind-the-scenes tour of the administrative, front desk and workshop areas. The children especially liked receiving a small sample of wood as a keepsake from the workshop staff. By going behind the scenes, children's eyes were opened to the larger world of museums and museum work. They were able to see that there is much more going on in the museum than what is on view in the public galleries. At the conclusion of the visit, the Sciencentre staff provided the class with a quiet space to sit and share experiences and impressions of the visit.



**Figure 32.** Behind-the-scenes tour at the Queensland Sciencentre.

Each Sciencentre visit was followed (approximately one week later) by an intervening classroom lesson that consisted of a review of the past visit and a preview of the up-coming visit. To prepare children for visit #2 to the Sciencentre, they were introduced to *Velvet* the gecko, a character they would be seeing in 'ScienceSpot' – the early childhood exhibition area to be explored during the visit. The children were also provided with opportunities to engage in hands-on activities to help them become familiar with the science concepts to be explored during the visit – light, sound and simple machines.

#### Visit #2

On visit #2, the Early Childhood Coordinator of ScienceSpot greeted the class. She moved the group upstairs to the exhibition area and provided an introduction to the space, explaining the many different areas to be explored. Adults were encouraged to support children's learning by asking the children questions found on the 'Find the Spot' guide sheet (see Resource 5). Throughout the session, children engaged in cooperative work and play, problem-solving and experimentation. At the end of the visit, the groups met in a quiet spot to reflect on their experiences.



**Figure 33.** Cooperative work and play in ScienceSpot.

The intervening lesson at school served to build on children's understandings by encouraging them to discuss ideas gained from the past visit as well as foreground the focus for visit #3 – movement. The theme 'movement' was selected because it was part of the Year 1 science curriculum. Demonstrations, discussion and hands-on investigations were used to introduce children to the topic. An important feature of the lesson was having children become familiar with the 'How Does It Move?' guide sheet (see Resource 6) that they would use during the Sciencentre visit. This was accomplished by both modelling how to use the guide and having the children practise using it.

#### Visit #3

Sciencentre staff met and welcomed the class. Shortly after the group's arrival, they were led upstairs to the theatre to watch the 'Unexpected Science' show. Many aspects of the show contributed to its overall effectiveness. First, the physical space provided was well suited to the needs of the audience. The theatre setting served to increase children's level of excitement. The seats were comfortable and arranged so that everyone could be close to the presenter and see what was happening. Second, the content of the show was interesting. The unexpected nature of the show led children to experience a



wide range of emotions – laughter, anticipation, apprehension and wonder. A mix of both simple experiments the children could try at home and ‘wow’ experiments that they could see only at a science centre were conducted. The show was multi-sensory in nature and included loud noises, steam and popping lids. Third, the program was presented by a well-trained member of the Education staff who was knowledgeable and passionate about the topic. The content of the show was delivered at an appropriate level and in a manner that was exciting, engaging and memorable for the children.

After the theatre show, buddy groups investigated the concept of movement in the Energy & Forces gallery. Adult group leaders and volunteer explainers guided the experience by asking the children to think about what causes various exhibit components to move (and point to the symbol on the ‘How Does it Move?’ guide sheet). At the end of visit #3, children chose their favourite exhibit and were photographed with it.



**Figure 34.** Exploring the concept of movement in the Spinning Chair exhibit.

### Art Museum Visits

In Term 3, the children made three visits to the Queensland Art Gallery. The structure for these visits followed the same pattern as visits in Term 2 – pre-visit classroom lesson, museum visit, intervening classroom lesson, museum visit, intervening classroom lesson, museum visit, etc. The challenge for this group of children was to go from a totally hands-on experience to one that was primarily ‘eyes-only’. Different strategies were employed to enable children to become familiar with the behaviours appropriate to the art museum environment. One method used was role-play, whereby the classroom teacher played a child visiting an art museum. A second adult played the role of a security person, explaining to the child why she should not touch the artworks. The interaction was performed in a way that made the children laugh, but also conveyed the message that visiting art museums is often an eyes-only experience. Following the teacher-in-role performance, the children role-played appropriate art museum behaviour in their classroom.



### Visit #1

The purpose of visit #1 was to introduce children to the art museum environment. Upon arrival, a staff member met the class outside the Art Gallery. He welcomed the children and reviewed the 'rules' of appropriate behaviour. The group was divided into three smaller groups. A museum staff member was assigned to each group and led them on a tour through the many galleries, making stops along the way at pre-selected areas of interest. Because this was a first visit to the Art Gallery for many of the children and adult chaperones, the orientation tour was intended to provide an overview of the museum's size, layout and content. The part of the tour that generated the most excitement for the children was the stop at the feature of the Art Gallery that was designed especially for children – a mouse house. The mouse house served to connect the art museum with something from the children's life experience.

After a morning tea break the children took part in a treasure hunt activity. This was a highly motivating experience for the children. The clues, read by each buddy group's accompanying adult, contained questions that encouraged children to first locate, then look closely at the artworks. The children were very excited to find the treasure at the end of their search through the Gallery.

During visit #1, the children, for the most part, were able to demonstrate the eyes-only behaviour required at art museums. At the end of the visit, time was scheduled for children to express their thoughts about the experience. In addition, children were given an activity sheet entitled, 'What we did at the Art Gallery today', to take home to help them recall their visit and promote discussion with their family (see Resource 21).

The format of the intervening lessons used between the art museum visits was similar to the format used between the science centre visits – reflection on the previous visit, followed by an overview of the upcoming visit's purpose, content and schedule. Because the purpose of visit #2 was to explore paintings, one of the objectives for the second classroom lesson was for children to learn to identify four types of paintings – self-portrait, still life, landscape and abstract. Posters of artworks from the art museum's collection were used to introduce the different types of paintings. After the introduction, children sorted postcards of the four painting types. The learning was reinforced by having children create self-portraits and still life paintings.

### Visit #2

The same member of the art museum staff that met the group for visit #1 greeted the children for visit #2. He led the group through the Gallery and had them sit down in front of a large painting. During a guided viewing session, the staff member used questioning strategies that encouraged the children to tell the story of the painting. The way in which he put children in charge, connected features of the painting to their lives and asked them to express their feelings made this a very engaging and memorable episode.

After morning tea, buddy groups explored different galleries, viewing and discussing paintings. Adults supported the children's experience, using a guide sheet entitled 'How many different kinds of paintings can you find?' (see Resource 3) to focus children on the task of identifying the four types of paintings they had learned at school – portrait, landscape, still life and abstract. Following this activity, the children were encouraged to draw their favourite painting using pencil and paper on clipboards.



**Figure 35.** Interacting with a portrait.

During the intervening lesson back in the classroom, children reflected on visit #2 and became familiar with the topics to be explored during visit #3 – Indigenous art and sculptures. Children looked at examples of Indigenous art and used a 'key' to identify symbols used in paintings. Sculptures were introduced by having children make comparisons between 3D sculptures and 2D paintings of the sculptures. Children were also shown photographs of some of the sculptures they would see during their subsequent visit to the art museum.

### Visit #3

Gallery staff greeted the class. The curator of Indigenous art then led the group into the theatre for a show-and-tell session. During the talk, children became junior curators, put on white gloves and handled artefacts. Both the hands-on experience and the stories told about the objects were very memorable for the children. The theatre provided a quiet setting with few distractions. After the session, buddy groups explored the Indigenous gallery. Adults guided the experience, assisting children to complete a 'Top Secret Mission' activity sheet (see Resource 4).



**Figure 36.** Junior curators ready to explore Indigenous artefacts.

After morning tea, museum staff provided the class with a brief introduction to sculptures. Buddy groups then went on a search for sculptures around the Gallery. Each group was given a 'Sculpture Search' guide sheet (see Resource 2) that included photos and information about the sculptures, as well as questions for adults to ask and activities for children to perform. At the end of the third visit, children revisited their favourite artworks and reflected on all three of their visits.



**Figure 37.** Children search, find and become 'Dreamtime Travellers'.

To build on their learning, back at school in their art class children created sculptures out of clay.



**Figure 38.** Post-visit clay work inspired by sculptures seen at the Queensland Art Gallery.

### History Museum Visits

In Term 4, the class made three visits to the Queensland Museum (at its South Bank location). Museum staff were very involved in both the classroom and site visits. During the first pre-visit classroom lesson, two Education Officers introduced themselves to the children. They previewed the kinds of things the children would see and learn about at the museum by showing real objects and models from the collection. They also discussed 'rules' for appropriate behaviour in the museum environment and answered the children's questions.

### Visit #1

Upon arrival at the museum, the children were greeted by the familiar faces of the two Education Officers (the children called out their names). The children were then led on a tour outside of the museum building to help them gain a sense of its size. The Education Officer guiding the tour stopped along the way to tell stories about items of interest.



**Figure 39.** Education Officer leads the group on an orientation tour around the museum building.

In the museum, the class was divided into three groups. Each group, led by a member of the museum staff, went on an orientation tour of the three levels of public galleries. The tour was intended to help both the children and the accompanying adults become familiar with the layout of the museum.

After a morning tea break, the class moved to a special area in the museum – the Inquiry Centre. This exhibition area is very popular with visitors because of the variety of interesting items on display in glass cabinets and because there are people available to answer inquiries. After a brief introduction to the Inquiry Centre, by a member of the Centre staff, the children went on a search for specific items on display (see Resource 8). Museum staff and adult chaperones supported the children's experience by helping them locate items and by asking and answering questions. After the activity was completed, the class came together to reflect on their experience and to ask staff additional questions.

The intervening classroom lesson began with a review and discussion of visit #1. Next, the children were introduced to the topic for visit #2 – exploring the natural environment displays. To introduce the topic, the Education Officers brought in prepared specimens from the natural environment collection, including a koala, python skin, turtle, parrot and other animals. After a show-and-tell session, the children were encouraged to examine and touch the animal specimens. The first-hand contact with these objects was a very memorable and exiting experience for the children. To conclude the lesson, the children were given an overview of the schedule (script) for the next museum visit.



**Figure 40.** Hands-on exploration of museum specimens in the classroom.

#### Visit #2

Following a welcome experience by the two Education Officers, the class was led to the lecture theatre where they viewed a slide presentation on the history of the museum. The children were highly engaged during the presentation. The following factors contributed to its success: 1) presenting the story in an interesting and compelling manner; 2) using images that captured the children's interest; and 3) allowing time to answer the children's questions.

After the slide presentation, buddy groups went off to explore the natural environment displays. Before entering each display, adult guides read the title of the exhibition and asked the children to think about what sorts of things might be in the display and what story the exhibition might be telling. Once in the exhibition, the children freely explored the exhibition areas. Following exploration time, the group found a quiet place to sit and discuss the children's ideas about the story being told in the exhibition.



**Figure 41.** Children experience smelly animal specimens behind the scenes at the Queensland Museum.

After a break, the class was divided into three groups. Education staff led the groups to a staff-only floor for a behind-the-scenes tour of the natural environment collection. The groups were met by curators, who explained their role in the museum and showed the children a variety of animals kept in the

preparation and collection storage areas. This was a highly memorable experience for the children – one that was multi-sensory in nature – looking, touching and smelling.

For the last portion of the visit, children moved to a student room where they participated in hands-on activities related to the natural environment. Here they used a microscope camera to examine fossils and animals, touched and/or drew specimens, tried on a Muttaborrasaurus head, completed a Stegosaurus jigsaw puzzle, fossicked around in a container of bone pieces and played imaginary games with plastic model dinosaurs.

During the intervening lesson at school, the class reviewed visit #2 and previewed museum visit #3. To introduce the theme for visit #3 – exploring the cultural heritage displays – an Education Officer brought into the classroom artefacts from the museum's cultural heritage collection. The children were asked for their thoughts on how various items from the past might have been used. After a show-and-tell session, the children were invited to carefully handle the objects.

#### Visit #3

On the third visit to the museum, an Education Officer greeted the class wearing a dress from the 'olden days'. This served to set the stage for the topic of the visit. The Education Officer then led the class to a cultural heritage exhibition where she explained the story being portrayed in one of the dioramas. After the talk, children freely explored the cultural heritage exhibitions in their buddy groups. Once again the children were encouraged to think about the stories being told in each display.



**Figure 42.** Education Officer interpreting a diorama in the 'Women of the West' exhibition.

During the third visit, the class was treated to a special morning tea with the Museum's Director. The Director greeted the children and told them about his work at the museum. He answered their questions and let them have a brief look in his office. Meeting the 'big boss' was a very memorable event for the children.





**Figure 43.** Touring the Director's office.



**Figure 44.** Dressing up in 'olden days' clothes in the activity room.

After morning tea, in buddy groups, children revisited their favourite areas and exhibits in the museum and had their photographs taken. The children then moved to a student room to participate in hands-on activities related to the cultural heritage displays. They had the choice of a range of activities: examining artefacts, dressing up in 'olden days' clothes, drawing or making an olden day craft. The combination of allowing children to follow their own interests and providing an opportunity to 'play' made the activity session a very successful learning episode. At the end of the activity time, the children were asked to comment and reflect on all three visits to the museum. As a final goodbye, the class had their photo taken with the Education Officers outside the museum in the dinosaur garden.

The year ended with a final classroom session in which the children performed skits about their museum visits and received a graduation diploma. Parents and museum staff attended, and food and drink added to the celebration.

Multi-visit/multi-museum programs can be structured in a variety of ways in order to best meet the curriculum needs of the schools in your area and to match your institution's collections and resources. Programs can be designed to explore a different topic during each visit, or one topic can be explored in depth at different sites during a series of visits. The possibilities are endless! Building partnerships with other institutions to develop thematic units can provide students with powerful learning experiences.

**Table 7**

*Queensland Sciencecentre Visit Itineraries*

Visit 1

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [10 minutes]
- **Iconic Experience** - In 'buddy' groups (1 adult with 4-5 children), children find exhibit icons identified on the *SCIconic Trail* sheet. [50 minutes]
- **Morning Tea / Toilet Break** [25 minutes]
- **Behind-the-scenes Tour** - Staff take groups (8-10 children with accompanying adults) on a behind-the-scenes tour of offices, front desk, security & workshop areas. [25 minutes]
- **Reflection** – Children are asked to share their experiences and impressions about the visit. [10 minutes]

Visit 2

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [5 minutes]
- **ScienceSpot: Introduction** – A member of the Education staff explains activity areas within ScienceSpot. [10 minutes]
- **ScienceSpot: Exploration** – Children engage in free-choice exploration. Adults guide experience by helping children focus on *Find the Spot* tasks. [45 minutes]
- **ScienceSpot: Discussion** – Children discuss their experiences and discoveries. [10 minutes]
- **Morning Tea / Toilet Break** [20 minutes]
- **Free-choice Exploration** of *Living Colour* exhibition (buddy groups). [20 minutes]
- **Reflection** – Children are asked to share their experiences and impressions. [10 minutes]

Visit 3

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [5 minutes]
- **Theatre Show** – Show featuring scientific experiments exploring the concept of 'unexpected science' [20 minutes].
- **Focused Exploration** – In buddy groups, children explore the concept of movement in the Energy & Force gallery. Adults guide the experience by using *How Does It Move?* sheet [45 minutes]
- **Morning Tea / Toilet Break** [20 minutes]
- **Empowerment / Documentation** – Children have their photos taken at their favourite exhibit (buddy groups). [20 minutes]
- **Reflection / Closure** - Children are asked to share their experiences and impressions. [10 minutes]



**Table 8**

*Queensland Art Gallery Visit Itineraries*

Visit 1

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [10 minutes]
- **Iconic Experience / Tour** – Staff lead groups (10 children) on trail to orient children to the museum environment. [25 minutes]
- **Short Talk** – Education staff talks to children about what they saw on the tour; discusses the different kinds of art on display. [10 minutes]
- **Morning Tea / Toilet Break** [25 minutes]
- **Treasure Hunt** – In ‘buddy’ groups, leaders read clues from *Treasure Hunt* sheet. Children locate the ‘treasure’. [40 minutes]
- **Reflection** – Children are asked to share their thoughts about the visit. [10 minutes]

Visit 2

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [5 minutes]
- **Read Me a Painting** – Guided viewing and discussion of *Evicted*. Staff explains how to ‘read a painting’. [20 minutes]
- **Morning Tea / Toilet Break** [25 minutes]
- **Painting ID** – Buddy groups explore different galleries viewing and discussing paintings. Leaders use the *How many different kinds of paintings can you find?* guide sheet to focus children on identifying four types of paintings – portrait, landscape, still life, abstract. [40 minutes]
- **Drawing** – Children are encouraged to make a drawing of their favourite painting. [20 minutes]
- **Reflection** – Children are asked to share their experiences and impressions. [10 minutes]

Visit 3

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [5 minutes]
- **Behind-the-scenes Talk** – Curator of Indigenous art explains what curators do and shows children artworks/artifacts. [15 minutes]
- **Guided Exploration** – Children become art detectives as adult guides help them complete their *Top Secret Mission* sheet (buddy groups). [15 minutes]
- **Morning Tea / Toilet Break** [20 minutes]
- **Introduction to Sculptures** – Staff-led discussion of one of the outdoor sculptures. [5 minutes]
- **Sculpture Search / Drawing** – Children look for sculptures using the *Search for Sculptures* guide sheet. Adults use prompt questions as stimulus for discussion (buddy groups). [30 minutes]
- **Empowerment** – Children have their photos taken at their favourite exhibit (buddy groups). [20 minutes]
- **Reflection** – Children are asked to share their experiences and impressions. [10 minutes]

**Table 9**

*Queensland Museum Visit Itineraries*

Visit 1

- **Welcome** – Class met and welcomed by museum Education staff. [5 minutes]
- **Orientation Walk** – Museum staff leads class on walk outside the museum building. [10 minutes]
- **Orientation Tour** – In small groups, children are introduced to the many galleries where natural environment and cultural heritage displays are housed. [40 minutes]
- **Morning Tea / Toilet Break** [25 minutes]
- **Inquiry Centre Exploration** – After a brief talk by museum staff, children locate various museum specimens/artefacts within the Inquiry Centre using the *Inquiry Centre Hunt* sheet. [30 minutes]
- **Reflection** – Children are asked to share their experiences and impressions. [10 minutes]

Visit 2

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [5 minutes]
- **Slide Show** – Class is led to the theatre to watch a slide show on the history and role of the museum. [25 minutes]
- **Free Exploration** – In small groups, children freely explore *Natural Environment* displays. Adults ask children to think about the story that is being told in each display. [25 minutes]
- **Morning Tea / Toilet Break** [20 minutes]
- **Behind-the-scenes Tours** – Museum staff take groups on a behind-the-scenes tour of the natural environment collection. [25 minutes]
- **Hands-on Activities** – Children participate in hands-on activities related to the natural environment displays. [20 minutes]
- **Reflection** - Children are asked to share their experiences and impressions. [5 minutes]

Visit 3

- **Welcome & Orientation** – Staff welcomes class and provides overview of the visit. [5 minutes]
- **Display Talk** – Museum staff introduce the cultural heritage displays by providing a brief talk in front of a selected exhibit. [15 minutes]
- **Free-choice Exploration** – In small groups, children freely explore *Cultural Heritage* displays. [40 minutes]
- **Morning Tea / Toilet Break** [20 minutes]
- **My Favourite Tour** – Children lead group members to their favourite exhibit, where they have a photograph taken. [20 minutes]
- **Hands-on Activities** – Children participate in hands-on activities related to the cultural heritage displays. [20 minutes]
- **Reflection** – Children are asked to share their experiences and impressions. [5 minutes]

# THE LAST WORD

Every trip to a museum has the potential to be an exciting learning experience, but much of the success rests on how well the museum staff work with the visitors. The ideas in this manual provide a rationale for working with young children and various strategies for implementing child-centred practices. As we have stressed throughout the manual, there are many ways to approach young children as a museum audience – and each encounter will be different.

Museum staff have to draw on a versatile range of ideas for bringing the museum to life for young children. From the Design team to the Education staff, each and every person in a museum has a role to play in welcoming young visitors. Enjoy the laughter, wonder, curiosity and challenge that accompany bringing children into contact with nature, culture, history, science and art.

## Acknowledgements

The ideas contained in this manual come from our experience of working with children, teachers and parents from Kelvin Grove State School, West End State School and St Martin's School in greater Brisbane; and from Roderick Street Community Kindergarten and Preschool in Ipswich.

The members of the QUT Museum Collaborative (2000 – 2002) worked to build new programs for young audiences. The QUTMC comprised several members of staff (both paid and volunteer) from four museums:

Queensland Art Gallery: Michael Beckmann, Melina Mallos

Queensland Museum: Richard Cassells, Derek Griffin, Robert Ashdown, Kylie Smith

Queensland Science Centre: Graeme Potter, Paul Parkinson

Global Arts Link: Louise Denoon, Malcolm Paterson, Tim Lynch

QUT: Barbara Piscitelli, David Anderson, Michele Everett, Katrina Weier, Collette Tayler

# **APPENDICES**

## APPENDICES

### Appendix A

Post-visit Writing by Year 1 Child  
(QUTMC)

yesterday year 1 went  
to the ~~Queensland~~<sup>Queensland</sup>  
Museum. We saw  
cool things. We heard  
the ~~whales~~<sup>whales</sup> sing. We  
saw sea anemones.  
We saw fossils. Eric  
showed us some shark  
skin. We saw a  
pearl. We saw shark  
teeth. We saw sharks.  
I liked the treasure hunt.  
We walked around the  
Museum. I liked  
turtles. It was fun. ✓

**Appendix B**  
**Post-visit Drawing by Year 1 Child**  
(QUTMC)



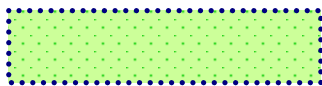
**Appendix C:**  
**Takeaway Sheet for Parents**  
(courtesy Global Arts Link)



Sat 15 Feb – Sunday 11 May

*grapple* presents a display of art objects that can be experienced by senses other than sight. Visitors are encouraged to hear, touch and smell the various works on display in a wonderfully interactive environment.

## Something for grown - ups to takeaway



Texture is the surface quality of an object.  
It is one of the elements of art (along with line, shape, tone, colour & space).

From a very young age children learn about the world through their sense of touch, discriminating all kinds of textures.

The interactive artworks presented in *GRAPPLE* offer children a range of experiences with texture. You can provide further experience at home through the following activities...

👉 Add sand to finger-paint. Talk about how the paint feels as it is moved around with the fingers. What kind of texture does it create if you make a print of your finger-painting on paper?

👉 Draw with fingers through water, sand, earth and leaves.

👉 Manipulate materials such as dough and clay, by squeezing, squashing, pinching, stretching, rolling, etc. Talk about how the dough feels in your hands.

👉 Make a pot using clay. Use different tools and objects to create all kinds of interesting textures on the outside surface of the pot. Try scratching, scraping, making impressions, etc.

👉 Do some crayon rubbings (“frottage”). Place a piece of paper on objects with different textures, such as a brick, the concrete footpath, a tyre, a wicker basket, fabric, etc. Then, rub over the paper with a crayon and see the many textures you have created!

👉 Take part in a sensory walk... in the city – touching the coldness of marble, iron, stone, concrete, glass, etc; in the bush – touching the different textures of leaves, bark, grass, the ground, etc.

👉 Visit a local natural feature (forest, rocky place, the beach, the bay, etc). Take photographs or make drawings of interesting textures.

👉 Collect natural objects from places visited. Arrange them alone or with other made objects to make an abstract construction, sculpture or collage that shows the shapes, colours and textures of places visited.

👉 Look at and feel your own and others' faces, hair, hands, clenched fists, spread fingers, etc and try to draw what you see and feel.

Useful texture words...

rough smooth prickly spiky grainy soft furry

fluffy bumpy scaly crinkly slippery greasy

sharp bubbly scratchy hairy lumpy



## © Rennie &amp; McClafferty, 1997

Sex and Age Range:		Interaction Code	
E	Explorer	M → E	M and E together
T	Teacher	M → E	M and E together
M	Male Adult	M → E	M and E together
F	Female Adult	M → E	M and E together
b	boy	M → E	M and E together
g	girl	M → E	M and E together

Take Notice		Interacts		Use		Purposefully	
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104
105	106	107	108	109	110	111	112
113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128
129	130	131	132	133	134	135	136
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265	266	267	268	269	270	271	272
273	274	275	276	277	278	279	280
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289	290	291	292	293	294	295	296
297	298	299	300	301	302	303	304
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361	362	363	364	365	366	367	368
369	370	371	372	373	374	375	376
377	378	379	380	381	382	383	384
385	386	387	388	389	390	391</	

Comments on visitor behaviour


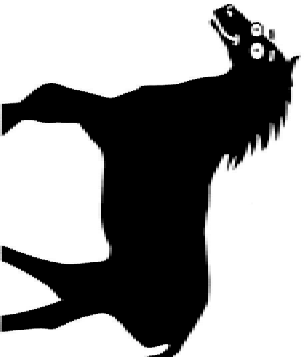


- ① Children cannot figure out what to do.
- ② Some adults could not find the magnet.
- ③ Children realised how to do it by watching other kids do it.

### Summary Recommendations:

- ① Indicate that there are magnets under the table
- ② Build/Replace a clear plastic table? Path in green?

Q.8.10

*Visits to museums are*

 <i>usually at a slow pace</i>	 <i>easy in pace</i>	 <i>sometimes rushed</i>	 <i>too rushed</i>
--	---	---	--

**Appendix F:**  
**Sample Page from Parent Diary**  
(QUTMC)

19 May 2001

Today Stuart + his sister Julia<sup>(3½)</sup> played the museum game. Firstly they had to construct the museum building. They collected an assortment of cushions from lounge suites and blankets. With these they made a range of different structures, some which formed part of exhibits and others which housed exhibits. They then raided the kitchen cupboards for a selection of see through jars in which to store their natural history specimens. After an hour they came and delivered to us an entry ticket and the museum catalogue (which was in fact the Kurilpa museum catalogue from term 1). On entry to the room where they had set up the museum we were advised that Julia was the curator and she had a disk where she was writing up labels for the exhibits. Stuart had made labels by sounding out the words + attempting their spelling. Stuart had written name, when + where for a number of objects, specifically those he had placed in see through jars as natural history specimens. Stuart took on a number of roles within the game: he positioned himself within one of the cushion structures as a fish exhibit, the other role was as guide explaining that

**Appendix G:**  
**Sample Pages from Term 1 Lesson Overview Document**  
 (QUTMC)

**Session 5** (School visit - 1.5 hours)  
What is a collection?

CONTENT	TEACHING & LEARNING TECHNIQUES / ACTIVITY	GROUP WORK	RESOURCES	CURRICULUM LINKS
Review and comments  Museums are made up of collections. What is a collection?	<b>Discussion:</b> Collections and "Treasures" <i>Does anyone have a collection?</i> <i>What sort of things do you collect?</i> Why? ( <b>Children's</b> stories - about their collections). <b>Word bank</b> – collection			<b>FLA:</b> Thinking Communicating Sense of self and others Social living and learning  <b>KLA:</b> SOSE: TCC 1.3
What kinds of objects are in museum collections?	<b>Teacher Show &amp; Tell w/</b> museum objects, to give brief overview of terms: <b>Living</b> <b>Preserved</b> <b>Original</b> <b>Model</b> <b>Hands-on</b>  <b>Children examine</b> specimens/artefacts		<ul style="list-style-type: none"> <li>Museum objects: <b>Living</b> (stick insect, hissing cockroach) <b>Preserved</b> (in jar, stuffed or pinned) <b>Original</b> (artwork, dinosaur bones, vertebrae, washboard, Aboriginal artefact) <b>Model</b> (model of snake, frog, vertebrae, washboard) <b>Hands-on</b> (manipulative puzzles)</li> <li>Word cards associated with above categories (including a picture as e.g.)</li> </ul>	<b>FLA:</b> Understanding environments Cultural understanding Sense of self and others  <b>KLA:</b> SOSE: TCC 1.4 & 1.5 Science: NPM 1.1

Collections tell a story	Teacher reads storybook		<ul style="list-style-type: none"> <li>Book: "Bits and Pieces"</li> </ul>	
<p>Introduce project for sessions 6 &amp; 7: What to collect?</p>	<p><b>Discussion</b> Explain to learners that they are going to create a class museum that tells the story of their class/school/community</p>	<ul style="list-style-type: none"> <li>Children discuss what story they would like to tell (e.g. what's in our playground, class artwork, favourite toys, favourite snacks, favourite hobbies, favourite books, favourite games, our families, our pets).</li> <li>Children make decisions about items to collect.</li> </ul>	<ul style="list-style-type: none"> <li>Paper and texts to record ideas</li> </ul>	
Link to Session 6	"Homework": find an object to display in the mini-museum.			

## **Appendix H:**

### **Sample Term 1 Lesson Plan**

(QUTMC)

#### **Session #3: Who works in a museum?**

**Aim** For children to become familiar with the kinds of jobs performed by people who work in museums

**Objectives** Children will demonstrate an understanding about the kinds of jobs people who work in a museum have by:

- Naming different job titles
- Role playing workers in a museum
- Discussing the role museum workers play in caring for the collection

#### **Set-up / Preparation / Resources:**

Book "Working in a Museum"

Props for role-play:

Books (Art, Science, Rocks)  
Sound materials: string telephones, tuning forks, hangers  
Pictures in frames, picture cards, small art objects.  
White gloves, brushes  
Labels – some blank  
Drawings, drawing paper, pencils  
Tools, boxes  
Paper for signage  
Rocks

#### **1) Review and Comments**

- Record children's recollections about concepts introduced in previous sessions.

#### **2) Introduction (10 minutes)**

- Teacher role-plays a person working in a museum.
- Ask children to guess "who am I?"
- If no one guesses, tell children what museum worker you were pretending to be.
- Explain to children that today they are going to investigate the topic – "Who works in a museum?"
- Teacher asks children, "What do people who work at museums do?"
- Teacher introduces the concept of collections & exhibitions (museum workers collect, research, preserve, display and educate people about their collections – in the form of exhibitions).
- Teacher reads book - "Working in a Museum".
- Teacher introduces visitor.

#### **3) Guest talk (15 minutes + time for Q &A)**

#### **4) Role Play (approx. 25 minutes)**

- Teacher explains that the children will have an opportunity to pretend to be museum workers.
- Teacher explains that the class will be divided into three groups and that each group will be museum workers at one of three museums: Art, Science, or History
- Teacher demonstrates (and/or has children demonstrate) museum jobs to be carried out at each site using props: Curator (research and care), Exhibit Designer (plan space), Exhibit technician (build)
- Guided by an adult, at each site children use props to carry out jobs.

At Art Site: collection = pictures in frames, picture cards, small art objects.

Goal: Art exhibit

Jobs

1. Curator: research (art books); care for collection (white gloves, brushes); write labels (labels – blank)
2. Exhibit designer: plan what exhibit space should look like (drawings, drawing paper, pencils)
3. Exhibit technician: build display--“hang” pictures, put up labels (carpet board, Velcro)

At History site: collection = rocks

Goal: Rock exhibit

Jobs

1. Curator: research (rock books); care for collection (brushes); write labels (labels – blank)
2. Exhibit designer: plan what exhibit space should look like (drawings, drawing paper, pencils)
3. Exhibit technician: build display, place labels (tools, boxes)

At Science site: collection = hands-on “sound” (string telephones, tuning forks, hangers)

Goal: Sound exhibit

Jobs

1. Exhibit manager: research (science books - sound); write labels (paper for labels)
2. Exhibit designer: plan space (drawings, drawing paper, pencils)
3. Exhibit technician: build display, put up labels (tools, boxes)

- If time permits, tell the children that we are going to open the doors of our “museums” to visitors.
- Ask for volunteers to be “information desk” and “security” people.
- After visitors go through, tell children it is time for the museum to close.
- Children take down museum displays.
- Teacher asks children to reflect on role-play activity.

**5) Review / Preview / Closure**

- Teacher asks children to name something they remember about today’s topic, “Who works in a museum?”
- Teacher asks if anyone has any questions about what they did today.
- Teacher explains to children that they will find “museum people” in their box – and shows them some of the people.
- Teacher explains that next week we will be investigating the topic of, “What do we learn about in museums?”

## RESOURCES



# RESOURCES

## Resource 1

**Treasure Hunt Cards** (Art focus)  
(QUTMC)



**Resource 2**  
**Sculpture Search Sheet**  
 (QUTMC)

# SEARCH FOR SCULPTURES

These are some of the large sculptures that can be seen in the grounds outside the Queensland Art Gallery.



*Can you find them?*

*(Remember to look up too!)*

Walk all the way around each sculpture to see them from all sides.



Gallery 7

**Anthony Caro**

**Unison**

**1981-82**

steel, rusted, varnished and painted

*Where is the positive space in this sculpture?*

*Where is the negative space?*



Gallery 8

**Joan Miro**

**Monument**

**cast 1970**

bronze with black patina;  
base welded steel, painted black

*Close one eye and use your finger to trace around the edges of this sculpture.*

*Are the lines straight or curved?*



Gallery 9

**Auguste Rodin**

**Madame Russell**

**1888**

wax

*Why do you think this sculpture is kept in the glass cabinet?*

*(Hint: Think about what it is made of.)*



Gallery 12

**Robert Klippel**

**Opus 247, metal construction**

**1965-68**

**1969**

welded and brazed steel, found objects, wood

*Can you find a part from a Tonka truck?*



Gallery 2

**Rick Roser**

**Dreamtime travellers**

**1994**

Natural pigments, human hair,  
vegetable fibre string, painted  
twigs and emu feathers on wood

*Can you make your body look like one of the travellers?*

*What other sculptures can you find in the Indigenous Gallery?*

## Resource 3

### Kinds of Paintings Search Sheet

(QUTMC)

## How many different kinds of paintings can you find?

Find some **portraits**, **still life**, **landscape** and **abstract** paintings in the Gallery.

Talk about them with your group. Which ones did you like the best? Why?

### Portraits

... a portrait is a painting of a person or a group of people.

Our group found \_\_\_\_\_ portraits.

Here's an example of a portrait.



### Still life paintings

... a still life is a painting of non-moving objects (like fruit, books, flowers, furniture).

Our group found \_\_\_\_\_ still life paintings.

Here's an example of a still life.



### Landscape paintings

... a landscape is a painting of an outdoor scene, including mountains, trees, sky, fields, buildings, water.

Our group found \_\_\_\_\_ landscape paintings.

Here's an example of a landscape.



### Abstract paintings

... in an abstract painting, the artist arranges lines colours, shapes and textures. Some abstract works of art do not have recognisable subject matter.

Our group found \_\_\_\_\_ abstract paintings.

Here's an example of an abstract.



## Resource 4

### Indigenous Gallery Search Sheet

(courtesy Queensland Art Gallery)

## TOP SECRET MISSION

QUEENSLAND ART GALLERY  
Indigenous Gallery 2

#### Rules of the game

No running

No touching

**ART DETECTIVE** (name).....

1. Can you find these circles?



2. Is Aboriginal rock art found in caves? ☐ Yes ☐ No

3. What is the large round pot made from?

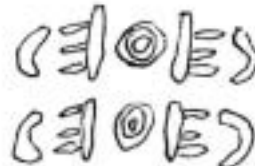


4. Can you find the painting with the long skinny salt lake?



5. How many bark paintings can you find? ☐ 2 or ☐ 3

6. Can you find a painting with this symbol?  
It is two women sitting and singing songs.



7. How many white triangle hills can you see in the big painting called 'Texas Hills'?

## Resource 5

### 'Find the Spot' Guide Sheet

(QUTMC)

# Find the Spot

## Action Spot

*Find the Spot* where you see a simple machine: a ramp; a wheelbarrow; a handle and crank; pedals and gears.

Question: How do these simple machines make work easier?

## Video Spot

*Find the Spot* where you can pretend to fly.

Questions: What do you see? What does it feel like?

## Showtime Spot

*Find the Spot* where you see curved mirrors.

Questions: Are you short or tall? Thin or wide?

*Find the Spot* where you see animals that are active at night.

Questions: What can you see? What do you notice about the animals eyes?

*Find the Spot* where you make different colour shadows of Velvet and her friends.

Question: How many different colours can you see?

*Find the Spot* where you can change the sound of your voice.

Question: Does your voice sound high or low?

*Find the Spot* where you use your feet to play a tune.

Question: How many different tunes can you play?



## Resource 6

### 'How Does It Move?' Guide Sheet (QUTMC)

## How Does It Move?

by Air



by Magnets



by Rolling



by Spinning



by Sliding



by Swinging



by Pushing or Pulling



by Something Else



## **Resource 7**

**Treasure Hunt Card** (*History focus*)  
(QUTMC)

### **Time Machine ...**

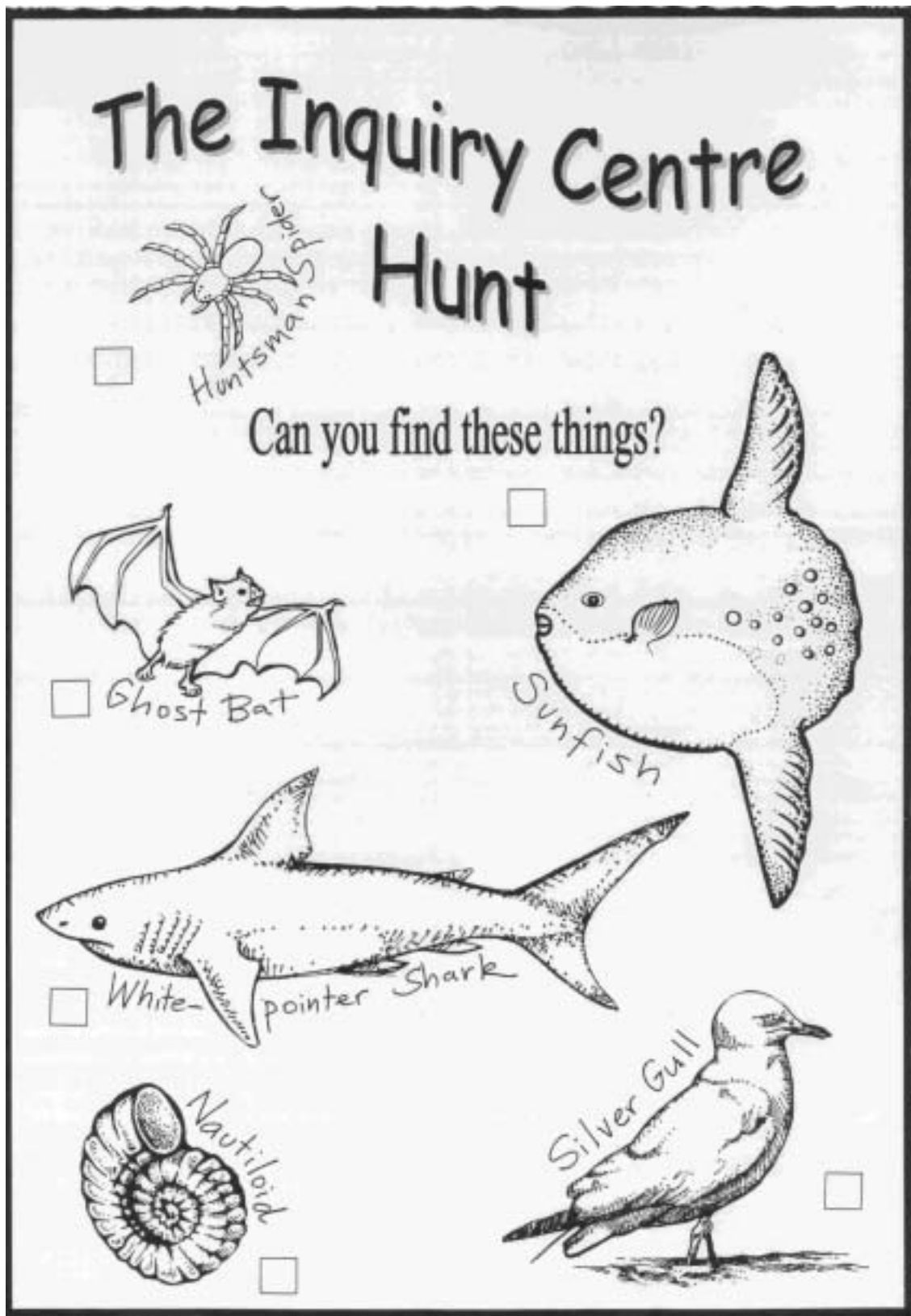


**Go to the year 1873  
to see photos of  
Lottie and her  
brothers performing  
their trapeze act.**

## Resource 8

### Inquiry Centre Search Sheet

(courtesy Queensland Museum)

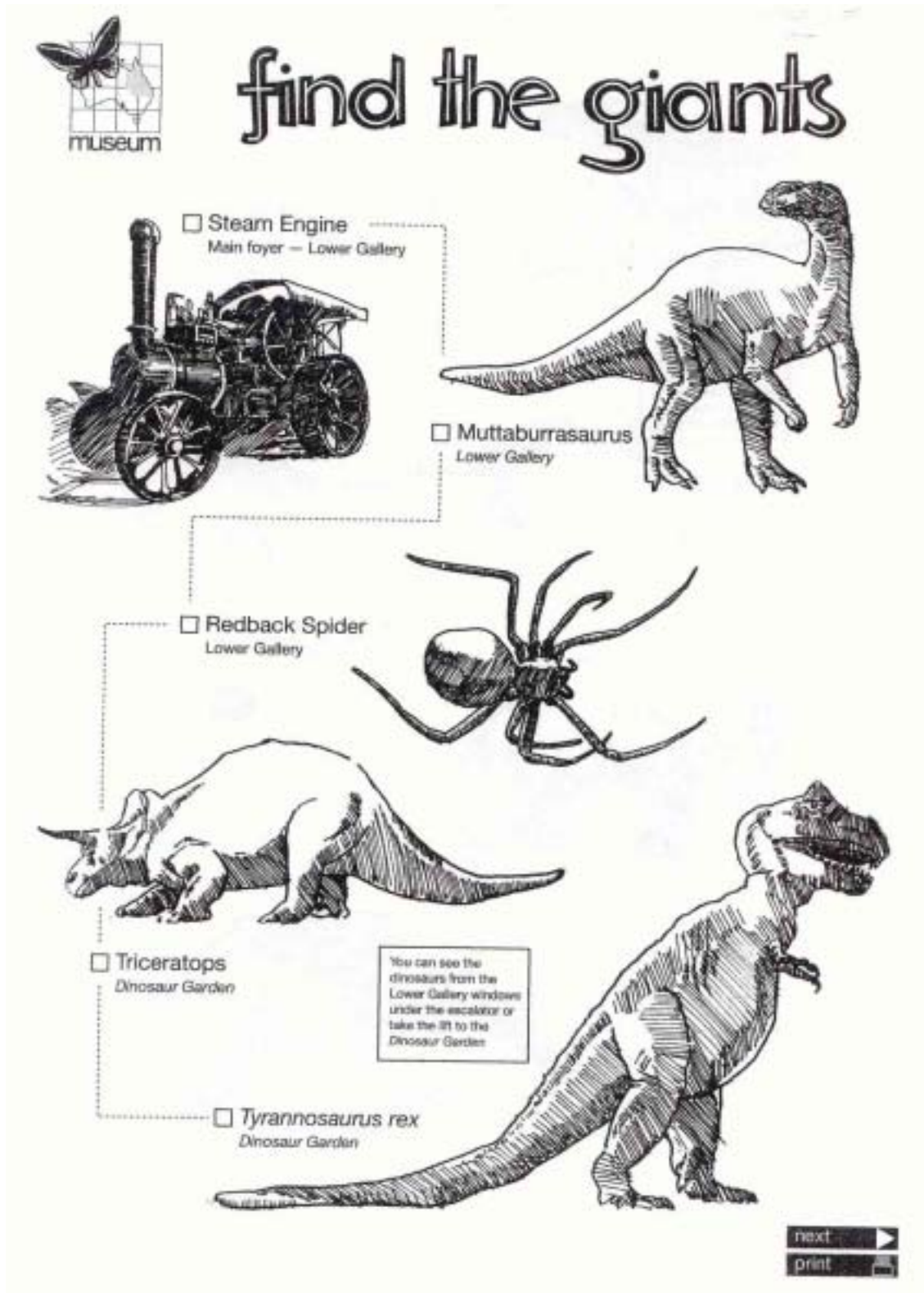




## Resource 9

### 'Find the Giants' Search Sheet

(courtesy Queensland Museum)



**Resource 10**  
**Research Sheet**  
(QUTMC)

Name \_\_\_\_\_

Object # \_\_\_\_\_

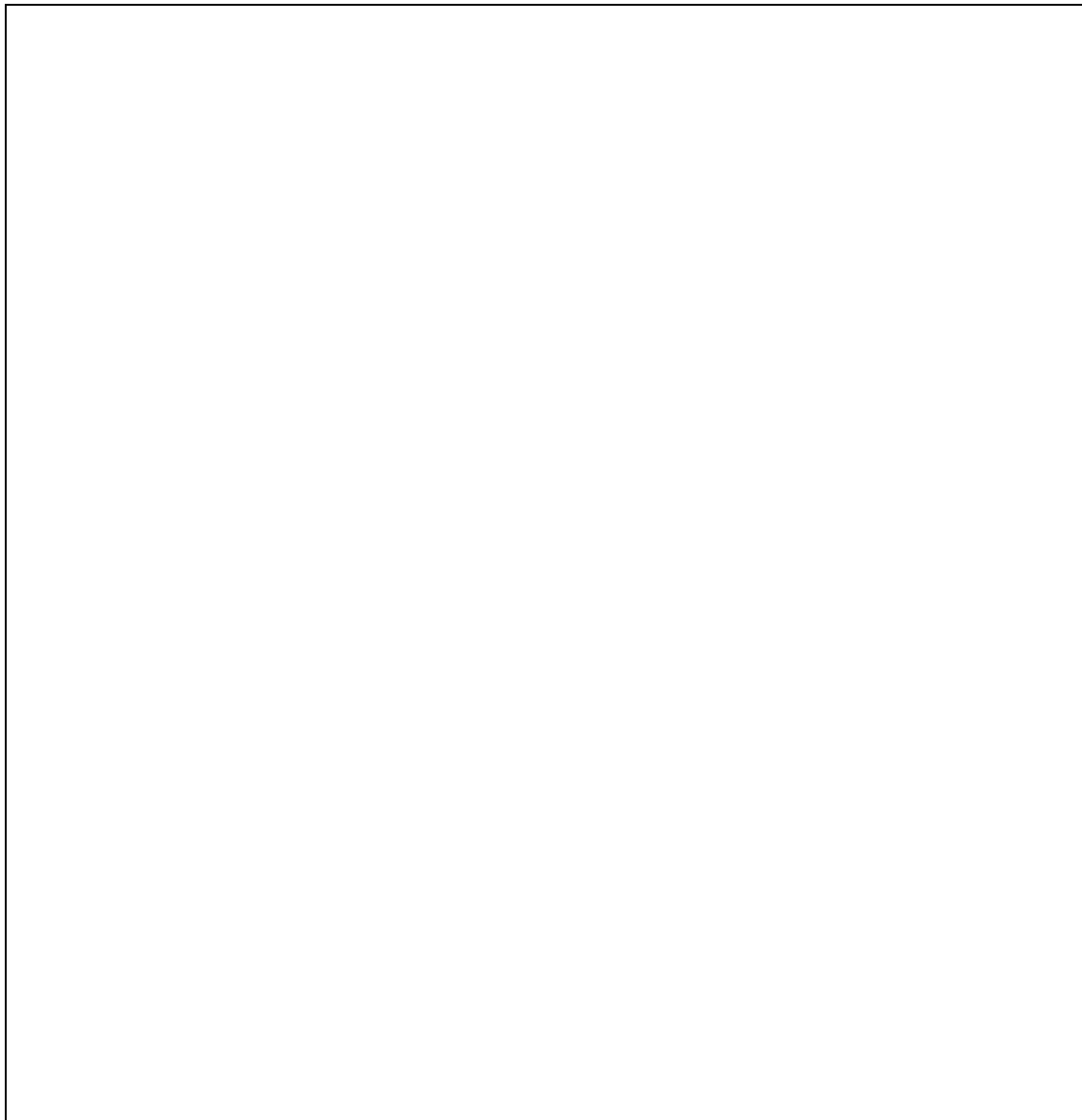
**My classroom museum object**

What is it? \_\_\_\_\_

Where is it from? \_\_\_\_\_

Why is it special? \_\_\_\_\_

---



**Resource 11**  
***Mini-museum Label***  
(QUTMC)

Name .....

Object .....

Object # .....

**Resource 12**  
**Museum Staff ID Badge**  
(QUTMC)



**Resource 13**  
***Mini-museum Program***  
(QUTMC)

**The Kurilpa Museum**

**Presents:**  
**An exhibition of special objects**

**West End State School**  
**Mrs. Cumerford's Year 1 Class**

**Tuesday, 3 April 2001**

**Exhibition Guide**

Name	Item No.	Object
Oliver	1	moth
Stuart	2	metal ashtray with old plane
Madison	3	original artwork
Anusha	4	wooden butterfly
Mitchell	5, 6	turtle shell, shark jaws
Oscar	7	old metal object
Rhiannon	8	thunder egg
Samantha	9	old dish
Ben	10	crystals
Telly	11	original artwork
Kate	12, 29	clay model, Chinese Coke bottle
Hannah	13	artwork – bird
Georgia	14	thunder egg
Andrew	15	boomerang
Morgan	16	Black Bean tree seed pod
Isabella	17	shell necklace
Maeve	18, 28	petrified wood, centipede
Liam	19	Tyrannosaurus Rex
Finnegan	20	freshwater crayfish
Danny	21	Tyrannosaurus Rex
Ned	22	Indonesian money
Ryota	23	Styracosaurus
Anna	24	thunder egg
Anika	25	wooden box from India
Nick	26	Stegosaurus
Roy	27	shells

# Resource 14

## Mini-museum Catalogue

(QUTMC)



**MUSEUMS COLLABORATIVE**  
 VISUAL EDUCATION, INTERACTIVE AND  
 RESEARCH, LEARNING AND RESEARCH  
 A COMMITMENT TO EXCELLENCE  
 AND EXCELLENCE IN RESEARCH

### Presents...

An exhibition of the  
 Year 1 St Martin's children's  
 treasured objects

**At: The MG Play Museum**  
**On: Tuesday April 3, 2001**

**Collection Items:**

 <p><b>Item # 1</b>            Name: Mikey            What? Prism            Why is it special?            I like it</p>	 <p><b>Item # 9</b>            Name: Jordi            What? Velociraptor            Why is it special?            It's for people to see</p>	 <p><b>Item # 17</b>            Name: Stephanie            What? Photo            Why is it special?            It's my first day of school</p>
 <p><b>Item # 2</b>            Name: Cameron            What? My Painting            Why is it special?            I like it</p>	 <p><b>Item # 10</b>            Name: Georgia            What? Beauty            Collection            Why is it special?            It was a present</p>	 <p><b>Item # 18</b>            Name: Todd            What? Crystal            Why is it special?            I wanted a crystal</p>
 <p><b>Item # 3</b>            Name: Lauren            What? Book            Why is it special?            I like it</p>	 <p><b>Item # 11</b>            Name: Macushla            What? Tambo the            Teddy            Why is it special?            It was a present</p>	 <p><b>Item # 19</b>            Name: James            What? Tazman            Why is it special?            It's part of my            village</p>
 <p><b>Item # 4</b>            Name: Bridie            What? Rag Doll            Why is it special?            It's as old as me</p>	 <p><b>Item # 12</b>            Name: Gemma            What? Shells            Why is it special?            Collected on holiday</p>	 <p><b>Item # 20</b>            Name: Anthony            What? Dinosaur            Why are they            special? They're my            brother's</p>
 <p><b>Item # 5</b>            Name: Bianca            What? Baby Photo            Why is it special?            It's a memory</p>	<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 80%;"> <p>Please join us for              Morning Tea              after viewing the exhibition</p> </div>	
 <p><b>Item # 6</b>            Name: Lachlan Mc            What? Toy Sword            Why is it special?            It's my favourite toy</p>	 <p><b>Item # 14</b>            Name: Artur            What? Pikachu            Keyring            Why is it special?            It was a present</p>	 <p><b>Item # 21</b>            Name: Lachlan F            What? Photo of my            dog, Oscar            Why is it special?            Memory of Christmas</p>
 <p><b>Item # 7</b>            Name: Joshua            What? Shells            Why are they            special? They are            my favourite shells</p>	 <p><b>Item # 15</b>            Name: Isobel            What? Necklace            Why is it special?            It was a present</p>	 <p><b>Item # 22</b>            Name: Ruby            What? Fish            Why is it special?            It's like a skeleton</p>
 <p><b>Item # 8</b>            Name: Nathan            What? Triceratops            Why is it special?            It's my favourite            dinosaur</p>	 <p><b>Item # 16</b>            Name: Samantha            What? Necklace            Why is it special?            It was a present</p>	 <p><b>Item # 23</b>            Name: Alexandria            What? Barbie &amp; Ken            Why are they            special? They have            nice clothes</p>
		 <p><b>Item # 24</b>            Name: Mitchell            What? Photo of me            as a Power Ranger            Why is it special?            Birthday present</p>



**Resource 15**  
**'My GAL Tour' Sheet**  
(QUTMC)

# My GAL Tour

**Tour Guide:** *Kyle*



Wayne Gardner's Motorbike



Big Bang (Motorbike)



Blow-up Car



Wally Lewis Statue



## **Resource 16**

### **Book List**

#### **MUSEUMS**

*Museums: Great Places to Visit* by Jason Cooper [The Rourke Corporation, 1992].

*Working at a Museum* by Arthur John L’Hommedieu [Children’s Press, 1998].

*Make Your Own Museum* by Keith Godard (Illustrator) & Andrea P.A. Belloli [Ticknor & Fields, 1994].

#### **VISITING MUSEUMS**

*George and Lily at the Museum* by Anne Gutman & Georg Hallensleben [Cat’s Whiskers, 2000].

*Franklin’s Class Trip* by Paulette Bourgeois & Brenda Clark [Scholastic, 1999].

*Roy and Matilda: The Gallery Mice* by Susan Venn [Edwina Publishing, 1992].

*Visiting the Art Museum* by Laurene Krasny Brown & Marc Tolon Brown [E.P. Dutton, Reprint edition 1992].

#### **COLLECTIONS**

*Bits and Pieces* by Rebecca Berrett [Hamilton Books, 1991].

#### **SOCIAL HISTORY**

*My Place* by Nadia Wheatley & Donna Rawlins [Longman, 1987].

*What was the War Like, Grandma? Emmy Remembers World War II* by Rachel Tonkin [Reed for Kids, 1996].

#### **NATURAL HISTORY**

*Green Air* by Jill Morris [Greater Glider Productions, 1996].

*A Dictionary of Dinosaurs: 101 Dinosaurs from A to Z* [Ashton Scholastic, 1988].

*Dinosaurs Big and Small* by Kathleen Weidner Zoehfeld [Harper Collins, 2002].

*Create Your Own Dinosaur* by Nicholas Harris, Joanna Turner & Claire Aston [Orpheus Books, 2000].

*My Best Book of Dinosaurs* by Christopher Maynard [Kingfisher Publications, 1998].

#### **SCIENCE**

*Science Close-Up: Rocks* by Lin Bass [Western Publishing Co, 1991].

*Apples, Bubbles, and Crystals: Your Science ABCs* by Andrea T. Bennett & James H. Kassler [Learning Triangle Press, 1996].

*What Makes a Magnet?* by Franklyn M. Branley [Harper Collins Publishers, 1996].

#### **ART**

*Linnea in Monet’s Garden* by Christina Bjork & Lena Anderson [Farrar Straus & Giroux, 1987].

*Katie Meets the Impressionists* by James Mayhew [Orchard Books, 1997].

*Katie and the Mona Lisa* by James Mayhew [Orchard Books, 1998].

*Katie and the Sunflowers* by James Mayhew [Orchard Books, 2001].

*Degas and the Little Dancer* by Laurence Anholt [Barron’s Juveniles, 1996].

*Camille and the Sunflowers: A story about Vincent Van Gogh* by Laurence Anholt [Barron's Juveniles, 1994].  
*The First Starry Night* by Joan Shaddox Isom [Charlesbridge Publishing, 1998].  
*My Name is Georgia: A Portrait by Jeanette Winter* by Jeanette Winter [Silver Whistle, 1998].  
*A Bird or 2: A Story About Henri Matisse* by Bijou Le Tord [Wm. B. Eerdmans Publishing Co, 1999].  
*Olivia* by Ian Falconer [Antheneum Books for Young Readers, 2000].  
*Luke's Way of Looking* by Nadia Wheatley & Matt Ottley [Hodder Children's Books, 1999].  
*I Spy Two Eyes: Numbers in Art* by Lucy Micklethwait [Greenwillow, 1993].  
*I Spy a Lion: Animals in Art* by Lucy Micklethwait [Greenwillow, 1994].  
*Come Look With Me: Enjoying Art With Children* by Gladys S. Blizzard [Thomasson-Grant Publishers, 1990].  
*Key Art Terms for Beginners* by Philip Yenawine [Harry N Abrams, 1995].  
*For the Love of Auguste* by Brenda V. Northeast [Hodder Children's Books, 1997].

## Resource 17

### Postcards

(QAG, GAL, QM)

#### ART



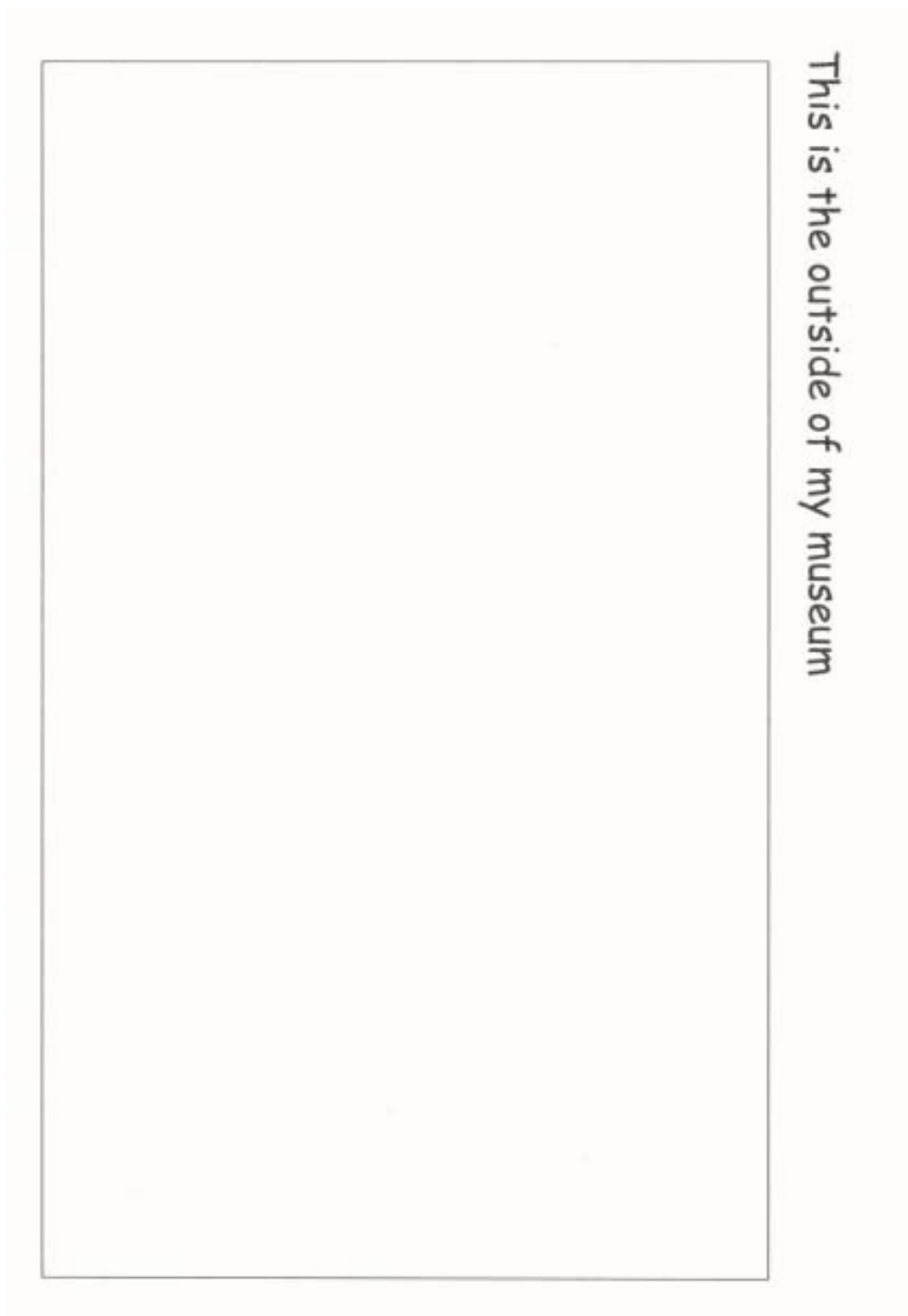
#### HISTORY



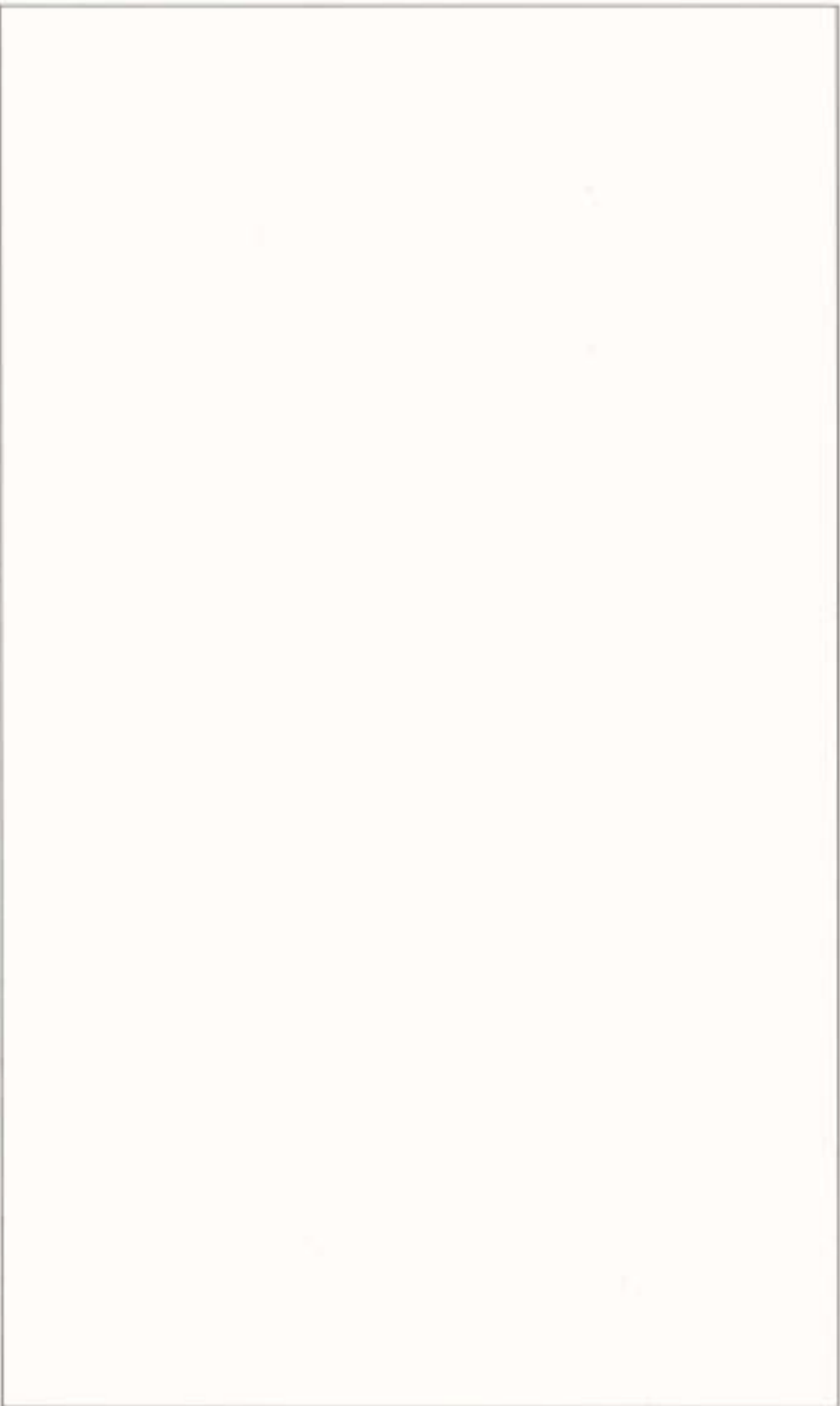
**Resource 18**  
***Museum Staff Cut-outs***  
(QUTMC)



**Resource 19**  
***Drawing Activity Sheets***  
(QUTMC)



This is the inside of my museum



**Resource 20**  
**'SCIconic Trail' Sheet**  
 (QUTMC)

## SCIconic Trail



Ground Floor	
<p>☞ <b>Lightning/Plasma Ball (Main Foyer)</b>          Contains a mixture of gases at low pressure through which a high voltage discharge is passed. Tendrils of glowing plasma stream out to where you touch the glass sphere.</p>	
<p>☞ <b>Slow Bubbles (Area One)</b>          Demonstrates the influence of bubble size on the shape and rate of ascent of a bubble in a viscous fluid.</p>	
<p>☞ <b>Tornado (Area One)</b>          Demonstrates whirlwind pattern of wind that occurs in a tornado.</p>	
<p>☞ <b>Rotating Seat/Spinning Chair (Area Two)</b>          Shows how ballet dancers, divers, skaters and gymnasts can control the speed of rotation by changing the position of their limbs.</p>	

<b>Ground Floor - continued</b>	
<p>☞ <b>Focussed Sound (Area Two)</b> Uses two large parabolic reflectors to carry whispered conversations across a noisy room.</p>	
<b>Level 1 (Middle Floor)</b>	
<p>☞ <b>Coloured Shadows (Area Three)</b> Different coloured shadows are produced when you step in front of red, blue and green lights shining onto a wall.</p>	
<b>Level 2 (Top Floor)</b>	
<p>☞ <b>Distorted Room (Area Four)</b> Demonstrates how a room can be perceived falsely - "trick the eye".</p>	
<p>☞ <b>Perception Tunnel (Area Four)</b> Demonstrates the reaction of our sensory system to sight and movement around us.</p>	
<p>☞ <b>Head on a Platter (Area Four)</b> Demonstrates the use of mirrors to create a famous optical illusion.</p>	



## Resource 21

### Take-home Discussion Activity Sheet



(QUTMC)

#### What We Did at the Art Gallery Today...

On our second visit to Queensland Art Gallery we learned about paintings . We learned that some paintings tell a story. We looked at different kinds of paintings: portraits , still life , landscape  and abstract . Here is a drawing  of the painting

I liked the best:



On our next visit to the Art Gallery we are going to learn about Indigenous art  and sculptures .

NAME \_\_\_\_\_

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