

Bupa Magic Garden



An interactive educational playground inspiring “healthy eating and healthy exercise” in young children, at Sydney’s Powerhouse Museum.



Challenge

In 2007, Sydney's Powerhouse Museum wanted to replace its aging series of educational, interactive children's exhibitions with a cutting edge, modular design that could engage families in different themes across the Museum, as permanent installations. With an open brief to explore the first educational theme, the design team wanted to inspire families with children ages 2-8 in adopting "healthy eating and healthy exercise" to mitigate the rising incident of children suffering potentially fatal illnesses that commonly only occurred in adults, such as morbid obesity and diabetes.

Solution

An educational interactive playground that supported families to learn through play about the health benefits of doing familiar home and outdoor activities, by experiencing them directly in the playground with the aid of technologies. Inspired by The Secret Garden, the playground's design was an immersive story world, shaped like a veggie patch, housing play activities including the communal experience of assembling a picnic on a multitouch table, splashing and chasing Port Jackson sharks in a digitally projected rock pool by the sounds of the beach, traveling the world in a prickly cactus to see healthy foods and mealtime habits, and a time machine that sparked curiosity using a journey of philosophical enquiry into life's many healthy and unhealthy choices.

Role

Led the design and development of the interactive playground as an Industrial Design Lead, reporting to the manager of the Department of Interactives and senior leadership.

Team

Working in-house with Industrial designers, electronics engineers, electricians, illustrators, animators, exhibition preparators (turners and fitters, carpenters and timber craftsmen) and curators.

Production liaison with external contractors: diverse multimedia artists including copywriters and production crew, software engineers, model and prototype makers, material suppliers and manufacturers, printers of signage and environmental graphics.

Design process

1. Scoping the opportunity in a design brief and identifying leading specialists, using trend analysis involving cultural analysis, social media analysis, secondary research.
2. Forming advisory partnerships with specialists in education and healthcare to scope the project together in workshops and interviews.
3. Development of communication themes, messaging briefs informed by writing a research report.
4. Form studies to develop a modular shape to allow the play space to be replicated
5. Development of a modular shape using experiments with materials and manufacturing
6. Talent scouting
7. Concept design, budgeting and pitching
8. Technology research and development
9. Applying anthropometric and ergonomic studies using full scale models
10. Design, engineering and technical drawings in CAD
11. Prototyping, usability testing and break testing
12. Production liaison of manufacturing, interactive multimedia, printing and software development
13. Installation, maintenance and upgrades based on customer review surveys and interviews

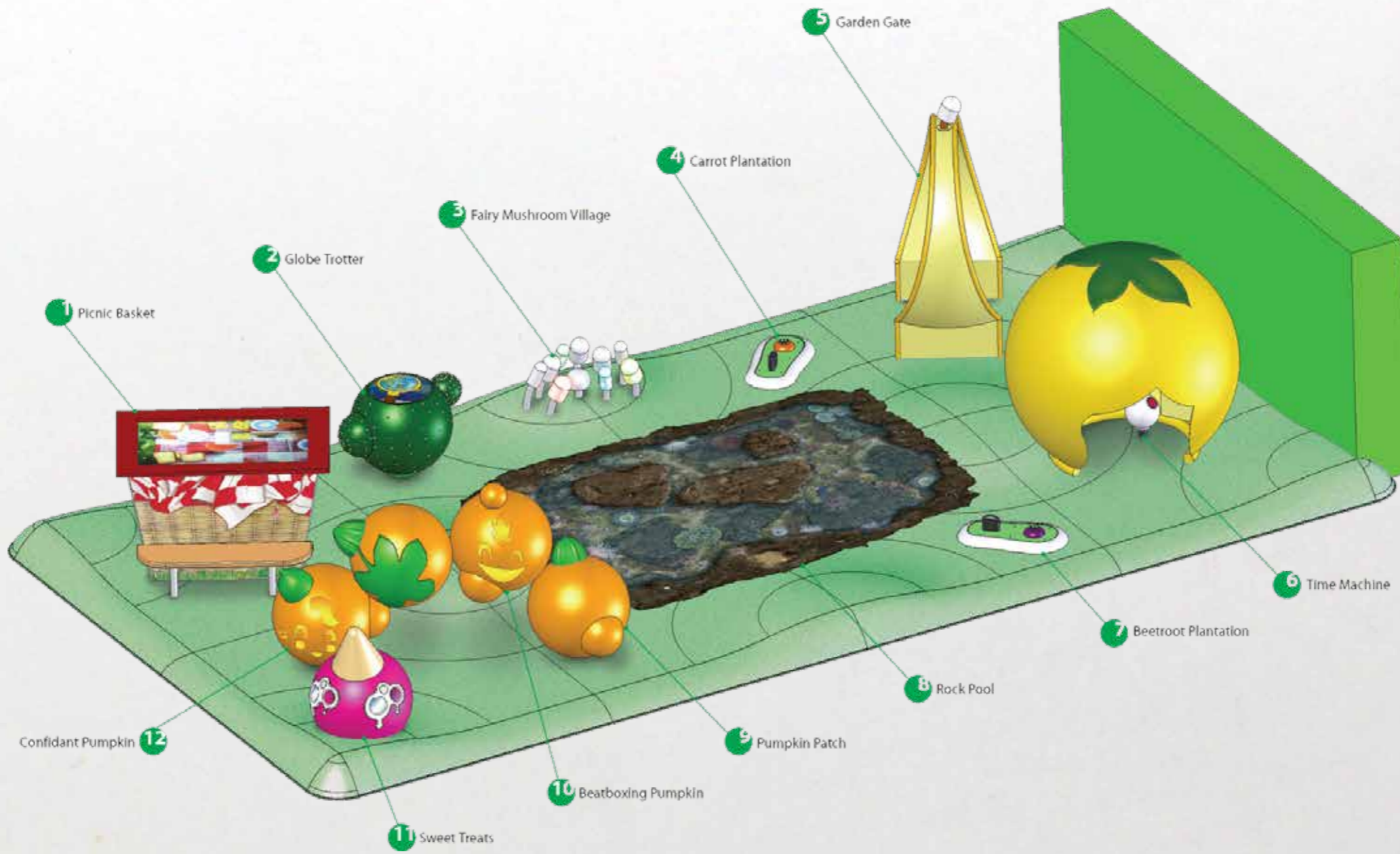
Learnings

- Children all ages are philosophical. Their innate curiosity is a powerful engine for creativity and learning.
- When faced with a new problem, pioneering a solution is made possible by scouting for unusual talent that purposefully addresses a specific part of the problem.
- Story worlds are inspiring. Inspiration is empowering. It shifts people from a state of being guarded into a state of being open to learn something new about themselves and the world around them.
- Polyethylene (playground plastic) appears flimsy but can be welded to offer great sturdiness and precision in manufacture. This innovation allows playground designs to support exponentially more diverse experiences and technologies.

Impact

- Word of mouth grew the playground's popularity to become the Museum's flagship exhibition for 6 years.
- The Museum promoted the Bupa Magic Garden's design as a world first in its educational capability and mode of delivery.
- The Time Machine's design was recognised as an innovation in applying Children's Philosophy by the University of NSW and Bremen University.

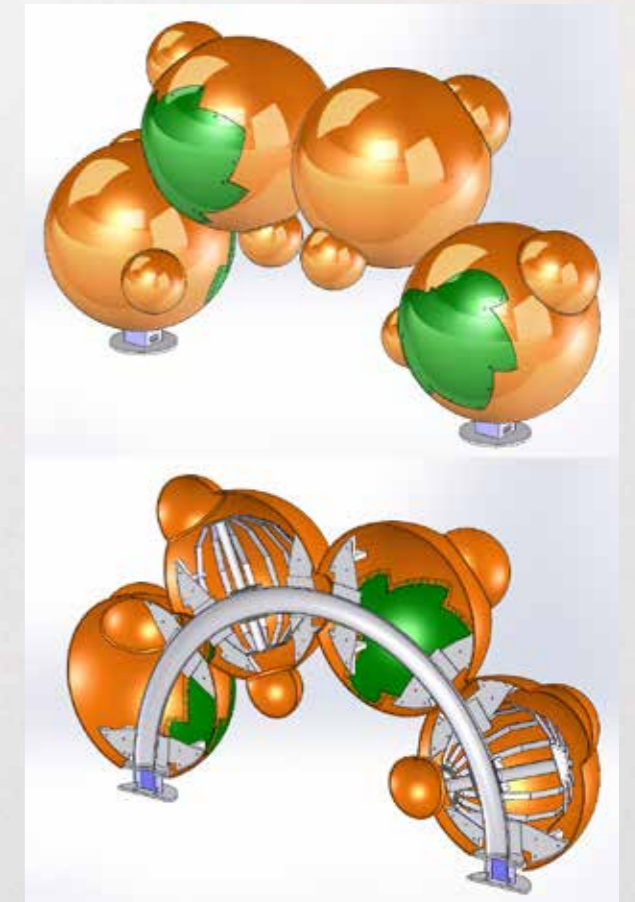
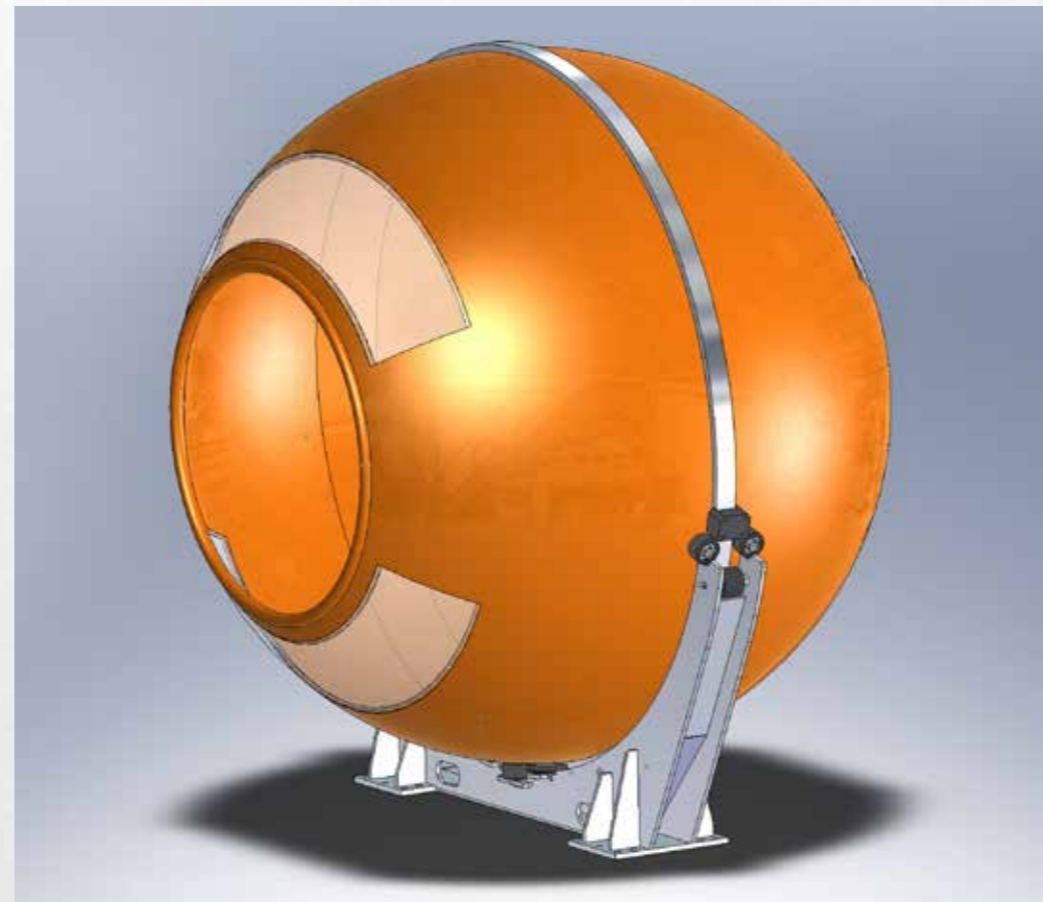






Form-studies inspired a spherical shape universally familiar to all.

Engineering experiments led to giving flexible playground plastics rigidity, strength and the precision to allow the development of structures including rides, that were previously not thought possible in playground design.



Story worlds inspire. They shift visitors from a guarded state into a state open to receive inspiration.

We observed that when digital technology is seamlessly integrated into a structure, it creates a 'magical' story world. Possibilities for inspiring outdoor play abounded with digital technology, from designing activities that invited children to assemble a picnic and splashing in a rock pool, to quiet spaces to do Children's Philosophy.

