



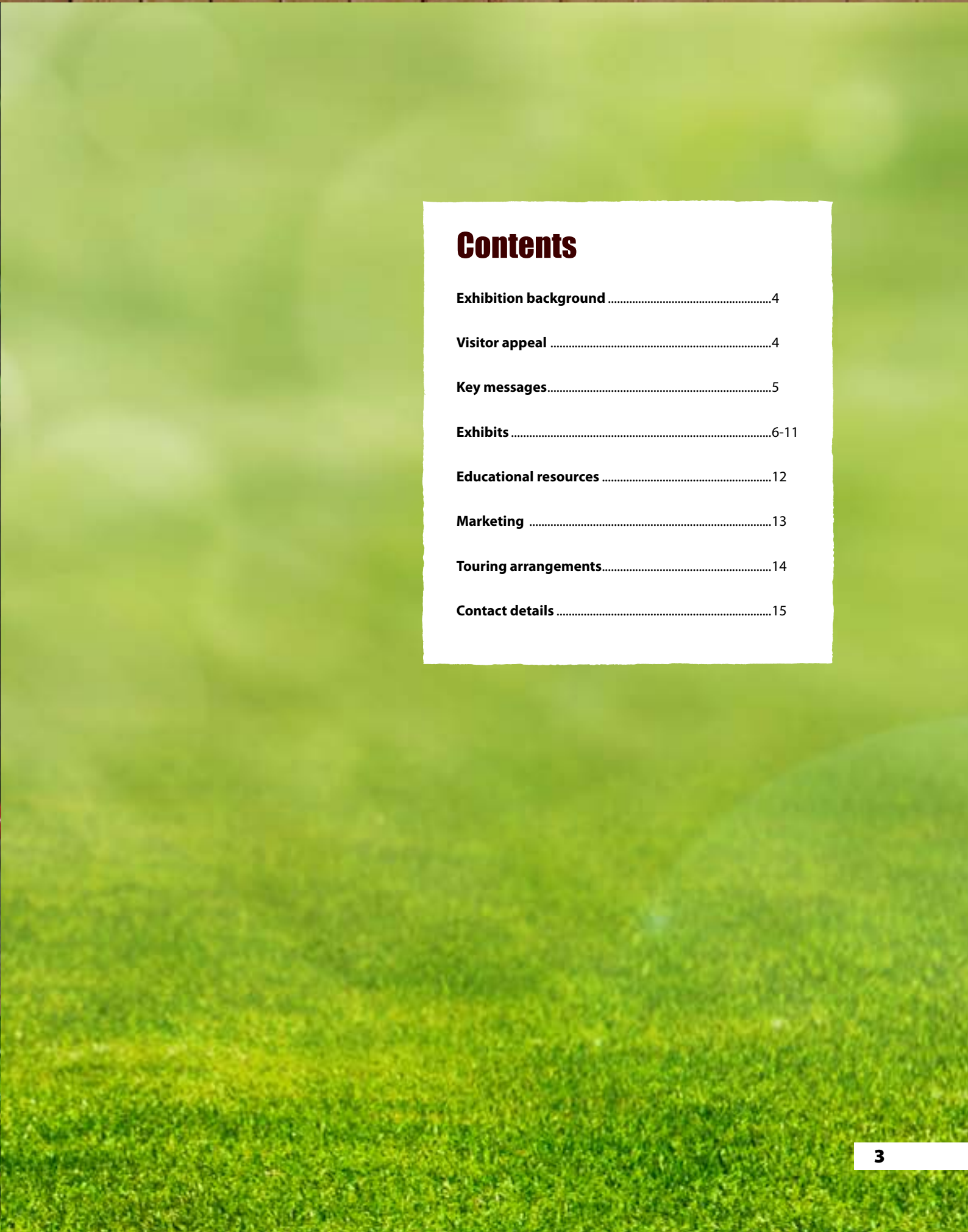
BACKYARD ADVENTURES

EXHIBITION GUIDE

DESIGNED AND PRODUCED BY

scitech

PERTH • AUSTRALIA



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Exhibition background

From the biological interactions between plants and insects, and the zoology of nocturnal animals to the horticultural know-how that goes into growing giant vegetables, the mathematical genius needed to lay pavers and the feats of construction that can go on in the shed, the backyard is full of science.

Scitech has created a traveling back garden, complete with a decaying house, and garden golf that will engage visitors with science and technology and enable them to continue discovering after they leave the exhibition.

Visitor appeal

Backyard Adventures is targeted at children aged between 5 and 12 years, although the exhibition does provide opportunities for learning and engagement for people of all ages.

The diversity of subject material will enable varied interest groups to become engaged with the exhibition, be they interested in gardening, zoology or physics.

The backyard enables visitors to engage with exhibits in a familiar environment, with similar experiences available to visitors in their own home situation. Many of the exhibits can be duplicated by visitors in their own gardens, taking the science center experience to a new level of engagement.

Significant opportunities exist for media exposure and sponsorship, reflecting the high level of interest in DIY projects and the home environment by the general public. Strong links to the school curriculum through the science stream also makes the subject material of interest to schools and educational organizations.

The exhibition

Backyard Adventures consists of 16 interactive science exhibits and extensive supporting sets and equipment. The exhibition is modular in design and will fit into a space between 4,300-6,500 square feet (400-600 square meters), depending on floor area available.

All exhibits are accompanied by inbuilt, durable graphic panels outlining what the visitor needs to do, explaining the science principles of the exhibit and providing additional information that may be of interest to people who want to know more.

KEY MESSAGES

1. Science is in everything and everyone can be a scientist

Visitors will be amazed at the science they can find in their own backyards. By observing science in a relatable context, they are encouraged to appreciate the biodiversity of their gardens (Food Web Pond), use problem solving (Garden Golf) and explore the physics of the tool shed (Garden Shed).

2. There is more to your backyard than you imagine

The exhibition focuses on seeing the unseen and taking a closer look at the world around you. The exhibition draws the visitor into the garden, making them more aware of their local world and how things interact, operate and live in that environment. Exhibits such as 'Plant vs Insect', the 'Bee's Eye View' and the 'Nectar Collector' enable visitors to discover details they normally don't see and ask questions about how organisms live in different environments.

3. Active outdoor play can benefit physical and mental health

Research has found being active outdoors is good for our mental health as well as our physical wellbeing. Being physically active helps lower the levels of obesity and related diseases, but just being outdoors can help reduce stress, anxiety and depression. Add creative and challenging activities and the health benefits increase further. Work up a sweat in this exhibition as you cycle on the 'Nectar Collector', get on the treadmill in 'Walk through the Seasons', and exert some energy with 'Backyard Sports'.

Exhibits

Night vision

Investigate the creatures that live in your garden at night. What do they do when you go to sleep? Try to find the animals in their own environment.

SCIENCE LINKS: Biology, ecology



Bee's eye view

Take a look at the garden through the eyes of a bee or a dog. Using special lenses, see how different creatures see the world around us.

SCIENCE LINKS: Biology, light (physics)



Walk through the seasons

Plants grow very slowly. Take a walk through our digital garden and observe plants growing in super time. Can you spot the changes that usually take months or years to happen?

SCIENCE LINKS: Biology, ecology, weather



Giant pumpkin bonanza

Do you have what it takes to grow a giant pumpkin? Try your hand at creating the world's biggest vegetable in our specially designed vegetable patch.

SCIENCE LINKS: Agriculture, horticulture

Food web pond

Explore the intricacies of animal-insect-plant interactions at the pond. Investigate which creatures rely on other creatures to survive in this frog-eat-insect world.

SCIENCE LINKS: Biology, ecology



Exhibits

Nectar collector

Jump on board the flying bee for a bee's eye view of the garden. Try your luck at pollinating flowers and collecting pollen for honey production. It's not as easy as it seems!

SCIENCE LINKS: Biology, ecology



Seed dispersal

Take a look at a number of plants and see what mechanisms they use for spreading their seeds through the environment.

SCIENCE LINKS: Ecology, physics

The garden shed

The everyday garden shed; a haven for power tools, ladders and lawn mowers. Step inside the shed and see what you can create with the tools and objects on the work benches.

SCIENCE LINKS: Physics, electronics, engineering, problem solving



Paver puzzle

Someone has started this DIY project and hasn't had time to complete it. Can you help complete the path using odd shaped pavers?

SCIENCE LINKS: Problem solving, mathematics

Critter calls

Investigate some of the animal noises that can be heard in the backyard. Can you match the call to the source? Is it a bird, frog or insect – the answer may surprise you.

SCIENCE LINKS: Biology, sound (physics)



Plant vs insect

Who will win? The plant or the insect? Examine the plant-animal interactions as you challenge friends in this interactive game. Arm yourself with natural defense mechanisms to beat your opponent.

SCIENCE LINKS: Biology, ecology, evolutionary biology

Exhibits

Dress ups

Designed for the younger ones, visitors can step inside the costume of a spider, bee or ladybug and experience the exhibition from a different perspective. Great for photo opportunities!

SCIENCE LINKS: Biology



The changing house

Stand back and watch as this amazing house changes through the seasons. Observe the effects of plants and animals and be intrigued by the process of decay. This exhibit uses a clever combination of physical walls and projection mapping to create a range of scenarios.

SCIENCE LINKS: Ecology, weather

Backyard sports

How fast can you throw a ball or kick a soccer ball? Check your speed and compare with your friends. A radar speed camera will record the speed of your throw and display it on a digital screen.

SCIENCE LINKS: Exercise science, physics



Garden golf

Try your hand at the backyard-themed mini golf. Be warned - you'll need more than good putting skills to get around this course!

SCIENCE LINKS: Physics, problem solving



Augmented reality garden bed

Dig down in the 'dirt' and see if you can spot the different layers of soil. Use your hands to make it rain and see the effects.

SCIENCE LINKS: Soil science, weather, biology, electronics



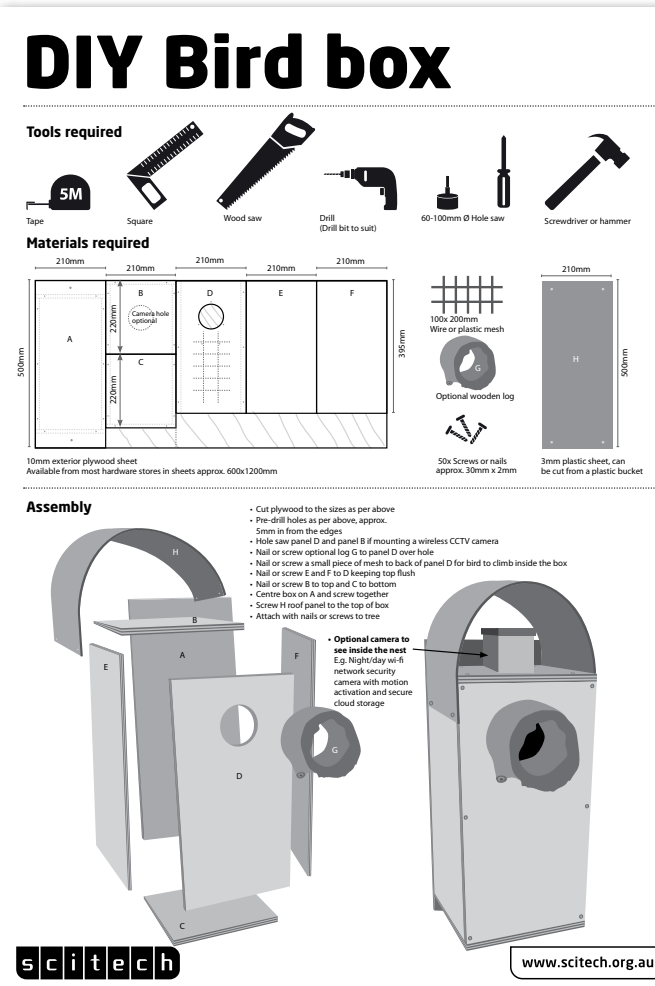
Educational resources

Backyard Adventures is accompanied by a School and Visitor guide to assist teachers and family groups visiting the exhibition.

This exhibition gives visitors the opportunity to practice science literacy skills, including:

- Horticulture
- Zoology
- Physics
- Problem solving
- Health

Imagine will provide each venue with a sample program to run with visiting schools. Venues are free to use and modify this material to suit the curriculum in their area or the target audience, providing due acknowledgement is made to Scitech.



Marketing

Backyard Adventures has been designed specifically for children aged between 5 and 12 years old although the subject material and exhibit content will have broad appeal for both younger and older audiences.

Imagine will provide the following marketing materials to help each venue promote the exhibition:

- Exhibition photos and videos (where available)
- Exhibition logos
- Examples of advertising and promotional artwork

Backyard Adventures will tour to other venues free of any specific sponsorship agreements, enabling host venues to link with a wide range of sponsors for the local market.

"Many families made return visits to Backyard Adventures. The interactives were designed for multiple users, and they helped keep the attention of young children."

– JULIE FISOWICH, Manager - Programming
Saskatchewan Science Centre, January 2017

Touring arrangements

The exhibition is designed to fit in a 400-500 square metres area in flexible configurations. The minimum height requirement for the exhibition is 2.7 metres, although a ceiling height of 4 metres is considered optimal. All exhibits are powered by standard 240v electricity supply and are designed to accept power from the ceiling or from the floor. The exhibition will travel in two 40' shipping containers and will include spare parts and equipment.

- Freighting the exhibition to the host venue
- Transit insurance
- An exhibition supervisor to coordinate the installation and dismantling of the exhibition
- An exhibition installation team to install and remove the exhibits
- Replacement parts through normal wear and tear

The host venue will need to supply the following:

- 400-500 square metres of unencumbered floor space
- Minimum ceiling height of 2.7 metres - optimal height is 4 metres
- Some additional overhead lighting
- Entry and exit points measuring at least 2.7 metres x 2.7 metre for movement of exhibits into and out of the building
- A licensed electrician to assist with the exhibition installation
- Replacement exhibit consumables as required
- 24 hour physical and or electronic security of the exhibition
- Appropriate storage for parts and crating
- Any special requirements (scaffolding, forklifts, trolleys, etc.) specified in the contract as necessary to install and remove the exhibition

PLEASE NOTE THAT ALL EXHIBITS ARE MULTI-VOLTAGE.

Contact details

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Information contained in this guide was correct at the time of publication.

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www.scitech.org.au