

The
AMAZING



EXHIBITION



FAMILY
GUIDE

Letter *of* Invitation.

Dear Parent / Guardian,

The Amazing Bodies Exhibition welcomes you and your children to uncover the astounding mysteries of life. With a new and exciting exhibition at Stirling Angas Hall, Adelaide Showground it is perfect for an enlightening family outing.

The exhibit is an eye opening journey through the inner workings of the human and animal bodies, revealing the intricacies of the skeletal, muscular, nervous, respiratory, urogenital, cardiovascular, digestive and respiratory systems. Featuring over three hundred anatomical specimens, including thirty aesthetically posed whole body specimens including transparent vertical & horizontal slices. It is a captivating display that is a mix of art and science.

The exhibition will take you and your children on a thought provoking journey that will generate both intellectual and emotional responses. It will challenge them to engage in a deeper understanding of how the human and animal body works using innovative plastination technology and display techniques. Some of the highlights of our exhibition include the muscular bodies of the horse, the powerful jaws of the Siamese crocodile or the lungs and heart of a Minke whale.

Comments from students that have visited the previous exhibitions: *"It's great! It's interesting how our body parts look and work,"* a young girl wrote. *"It teaches us about the effects of lifestyle choices and how we should take care of our body because it is so fragile,"* said a 16 year old student.

We hope our exhibit will provide you and your children with an interesting and exciting learning experience.

Thank You.

The Organisers

The Amazing Bodies Exhibition Australian Tour - 2011

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Planning Your Visit

Before

- Read the Frequently Asked Questions Family Guide.
- Visit the **Amazing Bodies** website (www.amazingbodies.com.au) for a preview of the exhibition.
- Discuss the visit with your children and explain what they are going to see and why.

During

- Seek out the Exhibit Staff for answers to your questions about the exhibition.
- Answer your children's questions honestly. It's okay not to know all the answers.

After

- Discuss the experience with your family using some of the discussion questions included in this guide as prompts.
- Visit some of the websites listed in the additional resources section.

Frequently Asked Questions

What is The AMAZING BODIES EXHIBITION?

The Amazing Bodies Exhibition is a first of its kind exhibition in which guests learn about comparative anatomy, physiology and health by viewing real human and animal specimens, preserved through an amazing method and scientific technique called “plastination.”

The preservation technique called “plastination” is where natural fluids are replaced with special plastics, enabling observation of many organs & systems under our skin. The Exhibition demonstrates, through comparative anatomy, the similarities and differences between different types of vertebrates and how they work inside.

To date, over 22 million people worldwide have seen such similar Exhibitions.

How is the Exhibition organised?

As you take a self-guided tour through The Amazing Bodies Exhibition, you can explore one body system at a time including the locomotive, nervous, respiratory, cardiovascular, digestive and reproductive systems. Whole body specimens are included through-out the Exhibition to show how these systems fit and function in humans and animals.

Informative audio-visual presentations are available to give detailed and engaging descriptions and provide an integrated learning experience.

Couldn't I learn just as much from books or models of Human & Animal Anatomy?

Until now viewing this type of detailed real-life anatomical display was the exclusive privilege of medical students & practitioners.

Extreme care and professionalism have been exercised in the preparation and production of each specimen during the process of plastination. A thin slice could take days of processing time, while whole body specimens may take months. Authentic specimens of this detail and calibre cannot be emulated in photos and textbooks. It is also an established fact that people relate better to real specimens like the plastinates rather than man-made artificial models.

What is Plastination?

Plastination is a modern scientific technique of preserving and replacing body tissues with plastic polymers while retaining the structure of tissues.

Invented by Dr. Gunther von Hagens, the plastination process replaces all the natural body fluids and fats with reactive plastics that are initially pliable, but then harden after infusion.

By hardening these plastics the specimens may be fixed into life-like poses, which illustrates how our bodies respond internally to everyday activities.

The plastination process of each specimen can take many thousands of “man-hours” and therefore the specimens are very valuable and expensive. Plastination ensures that all pathogens, bacteria & viruses that may occur in a body are totally destroyed leaving a perfectly sterile & safe specimen for educational purposes.

How many Plastinates are in the Exhibition?

The Exhibition features more than 300 authentic human and animal specimens including 30 aesthetically posed whole body animal specimens along with individual organs and transparent body slices.

Why are the Plastinates posed the way they are?

The poses of the plastinates have been carefully planned out to illustrate different anatomical and physiological features.

Where did the Specimens on display come from? Will we know personal details about the Specimens?

The specimens in this Exhibition are from voluntary body donors - individuals who bequeathed that, upon their death, their bodies could be used in this Exhibition for educational purposes. In making their donation, these voluntary donors agreed that all aspects of their identities, including age and cause of death would remain confidential.

All animals specimens in this Exhibition came from subjects that died from natural causes and were not harmed in any way to bring you this Exhibition.

Is this Exhibition appropriate for Children?

Over 22 million people have experienced similar Exhibitions worldwide, including millions of school children.

Nevertheless, due to the sensitive nature of this Exhibition, The Amazing Bodies Exhibition requires that children under 14 be accompanied by a responsible parent, guardian, teacher or school official. There may be displays in the exhibit that adults will need to explain to children in their care.

Unaccompanied children will not be allowed into the Exhibition.

Is this Exhibition appropriate for School Visits?

In all locations around the world where similar Exhibitions have been held, there has been extensive attendance by school groups, students and their families. Educational & health authorities recommend this Exhibition for children 7 years old and over while requiring that teachers obtain permission from a parent or guardian of each child to view the Exhibition. It is the responsibility of the school to ensure that permission has been obtained.

Due to the large number of school groups that will be attending the Exhibition, it will be necessary to pre-book attendance dates and times. This can be done by contacting Moshtix group ticketing on **1300 438 849**.

Regarding transport, there will be a loading zone and a bus drop off area for buses carrying school groups.

All booked student groups attending will receive a free audio guide of the Exhibition.

What are the Opening Hours of the Exhibition?

The Amazing Bodies Exhibition opens in Adelaide on Saturday March 5th and runs to the 8th of May.

The Exhibition will be open from 10am to 5pm Fri - Wed. 10am to 8pm Thurs.

Special out-of-hours viewing times are offered on a regular (advertised) basis together with special functions and public lectures by invited public health and scientific experts.

How long does it take to see the Exhibition?

Past experience has shown that it typically takes about 90 minutes to view and take in information of the Exhibition. Some school and special interest groups have taken many more hours viewing and examining our fascinating displays in more detail. It is not uncommon for art classes and artists to spend several days sketching and analysing the human and animal form in a way that is normally never possible.

How much does it cost to see the Exhibition?

Pricing has been set affordably at \$14 per student. School groups receive significant discounts on the admission price and accompanying teachers will be admitted free of charge (maximum - 1 per 15 students). Please see the website www.amazingbodies.com.au for further details and prices.

To avoid long queues and possible waiting, tickets can be purchased in advance through Moshtix on **1300 438 849**.

Tickets are also available for purchase through our Exhibition website www.amazingbodies.com.au.

Is the Exhibition accessible to People with Disabilities?

The venue is all on one level and there is ramp access throughout the precinct and to the car parks.

Can I take Photographs or Film in the Exhibition?

It is a condition of entry that visitors understand that photography & filming are strictly prohibited, except by approved & credentialed members of the media. This includes the use of mobile phones with cameras.

We thank you for your understanding. Food & drink (except bottled water) are also prohibited.

What other Materials are available for Educators?

There are several items available for purchase, including a catalogue and other materials in the shop located in the Exhibition.

All students & teachers attending the Exhibition as part of a "school group" booked through Moshtix or The Exhibition Box Office will receive complimentary electronic audio guide and headset to further enhance their visit to the Exhibition.

What is Vertebrate Life?

In the Animal Kingdom, life is classified into either vertebrates or invertebrates. While only 5% of all life, vertebrates are amongst the most dominant animals in the ecosystems of our planet.

The key characteristics that tie all vertebrates together are the vertebral column and a centralised system of nerves, with a distinct brain in the head and a spinal cord running down to the posterior. Because all vertebrates descended from a common ancestor, all vertebrate embryos have gills in their earliest stages of development.

Other characteristics that vertebrates share include distinct upper and lower jaws, a distinctly developed cardiovascular system for circulation and complex kidneys.

Despite fundamentally shared characteristics, the size, structure, biology and lifestyle of vertebrates differ greatly in the animal world. They are classified as: Agnatha (jawless fish), Chondrichthyes (Sharks), Osteichthyes (Salmon, carp), Amphibia (Frogs, salamanders), Reptilia (lizards, snakes, crocodiles), Aves (birds) and Mammalia (mammals).

Fish.

Fish, both cartilaginous sharks and bony teleosts are considered the

oldest form of vertebrates in the phylogenetic tree of life. With 22000 different species, fish comprise 48% of all vertebrates in total. They are defined by their cold bloodedness and breathing with gills in water.



Reptiles.

Characterised by their coldblooded circulation system, scaly skin and fully terrestrial reproductive behaviour, laying of amniote eggs, reptiles evolved from early amphibians and are the first truly terrestrial vertebrates.



Amphibians.

The first air-breathing vertebrate and the first to live on land, amphibians are believed to have evolved from lobe-finned fish making the switch to a terrestrial lifestyle about 360 million years ago. Despite this, amphibians still need to rely on water to reproduce.





Birds.

Believed to be the descendants of smaller dinosaurs, birds evolved from reptiles are characterised by feathers, warm blooded bodies, wings and a highly adapted skeletal and muscular structures designed for flight. There are currently over 9000 known species of birds around the world.



Mammals.

The latest branch of the vertebrate family to emerge; live birth, breast feeding and fur are what links the vast array of mammals together. From the tiniest rodents to the largest of whales, mammals come in every size and shape, live in every kind of way and hail from all types of habitats, due to their amazing adaptability.

What is PLASTINATION?

Plastination is a relatively simple process designed to preserve the body for educational and instructional purposes. Plastination, like many revolutionary inventions, is simple in concept:

“Plastination”, was developed by the German doctor, Gunther von Hagens in 1977 in order to educate people about their body in health and disease.

The specimen is first embalmed with a 5% formalin solution, and then dissected for the purposes of the demonstration. Next, fluids and fats are replaced by a concentration of ethanol and acetone. Following this, a vacuum pump extracts the acetone and replaces it with liquid plastic. Finally the specimen is adjusted to the proper position and gaseous curing agent is added to solidify the plastic.

Plastination Process

1

Fixation & Dissection

- **Fixation**
Specimens are fixed with 5% Formalin
- **Dissection**
Specimens are dissected according to our needs

Dehydration •

Bodily fluid and fat are replaced by ascending concentration of ethanol at Room Temperature and acetone in cold acetone bath

Defat •

Soluble fat molecules are replaced by acetone in warm acetone bath

Dehydration & Defat

2

3

Liquid Plastic & Solid Plastic

- **Forced Impregnation**
Acetone is extracted and gradually replaced with plastic by vacuum
- **Positioning**
Each structure is brought into the proper position
- **Gas Curing**

Getting to AMAZING BODIES

BY TRAM

Departs Adelaide from **Victoria Square** every 20 minutes, with the journey taking five-minutes to reach **Goodwood Road Station, Stop 7**. It is then a ten-minute walk from the tram stop to the **AEEC**.

BY BUS

Departs **Adelaide (Stop A2, North Terrace, Government House)** every ten minutes. Bus numbers are 210, 211, 213, 215, 216, T217, 218 and T219 Monday to Friday and 210, 214, 216 and 218 on weekends and public holidays. The journey takes approximately 15 minutes to reach the **Goodwood Road entrance (Bus stop 1 or 2)**.

BY TAXI

The **AEEC** is a five-minute taxi ride from the **Adelaide CBD** and a 15-minute journey from **Adelaide Airport**. Taxi ranks are located at the **Goodwood Road and Rose Terrace** entrances during all events.

BY TRAIN

The train is most suitable for those visitors attending **The Amazing Bodies Exhibition** which utilises the **Leader Street** entrance. Trains depart **Adelaide Railway Station, North Terrace**, every 30 minutes, with the journey taking nine minutes to **Goodwood Station**. It is then a ten-minute walk to the **AEEC**.

BY CAR

The **AEEC** is bounded by **Goodwood Road, Greenhill Road and Anzac Highway** and is easily accessible from all three arterial roads. On-site parking is available for approximately 2,000 cars. A parking fee of \$6.00 applies. Refer to the Event Calendar for parking arrangements for specific event.