

# EXPLORE! HANDS-ON TRAVELLING EXHIBITIONS

ATTRACT NEW AUDIENCES TO YOUR VENUE WITH OUR POPULAR HANDS-ON EXHIBITIONS



## WHO ARE WE?

Science Projects is an educational charity based in London whose aim is to promote the public understanding of science through the medium of hands-on exhibits. We have been designing and building exhibits for over 30 years and we also run a successful science centre as well as our travelling exhibitions. Importantly, our underlying core has always been committed to the promotion of learning and discovery.

## DESIGNED FOR YOU

The exhibitions are designed especially for use in public venues. They are quick and easy to set up so you can have an exhibition that is ready in less than half a day. They can attract new audiences and increase visitor numbers to your institution, providing an ideal way to present an ever-changing exhibition program.

The exhibits are highly interactive and are popular with all ages. As they are free-standing, they can be arranged in many different ways to suit your venue. Each exhibition takes up about 100sq.m. and for larger spaces, several exhibitions can be grouped together.

## EXPLORE! EXHIBITIONS:

Shocking Electricity  
Forces

Good Vibrations

Ancient Wisdom

The Arts of Art

Senses

Puzzles and Illusions

The Mechanicals

Medieval Machines

Optics

Life

EXPLORE!  
HANDS-ON  
TRAVELLING  
EXHIBITIONS

# SHOCKING ELECTRICITY!

Key information: 15 exhibits • requires approx  
100sq metres • requires 10 plug sockets

Sparks will fly in this exhibition of weird and wonderful experiments for all ages who can Make an explosion using just water, experiment with batteries and generators, magnets and plasma globes. All the key elements for a Frankenstein laboratory and more!



Exhibits:  
Human Battery  
Electric Fence  
Jacob's Ladder  
Electric Field  
Electro-magnet  
TENS machine  
Frog's Legs  
Plasma Globe  
Electrolysis  
Static Domes  
Transformer  
Resistance  
Switched on  
Circuits  
Wimshurst  
Machine



Exhibits:  
Gyro Wheel  
Roller Race  
Anti-Gravity Wheel  
See Stress  
Black Hole  
Magnetic Fields  
Magnetic Pendulum  
Balls and Bubbles in Liquids  
Air Stream  
Vortex Bottles  
Electricity and Magnetism  
Air Cannon  
Create a Fountain  
Canals  
Windy City  
Flying Wing



**Key information: 16 exhibits • requires approx  
150sq metres open floor space • requires 5 plug sockets**





# FEEL THE FORCE

The forces of nature are invisible but they affect every moment of our lives. You can feel them when driving round corners, ice skating or riding a bike. And you can see their effects in smoke rings and bubbles, even the way water flows when emptying the bath. These large-scale exhibits help explain how they work.

# GOOD VIBRATIONS

## the science of sound

We're surrounded by sound and our ears are bombarded by noise but do you know how sound is made and how it travels? It's all to do with vibrations of course.

Experiment with odd musical instruments, find out how your vocal cords work, puzzle your brain with sound illusions and watch your voice on a computer screen.

**Theramin** - This was the first music synthesiser to be invented. Users can play a tune by simply waving their hands close to two aerials.

Key information: 16 exhibits • requires approx 100 sq metres of open floorspace • requires 10 plug sockets.





Exhibits:  
Vibrating string  
Vibrating Bowl  
Pressure wave  
Speech stretcher  
Delay phone  
Bucket radio  
Theramin  
Hearing tester  
Artificial vocal cords  
Ear clangers  
Phone a friend  
Sound or music?  
Tea chest bass  
Sound illusion

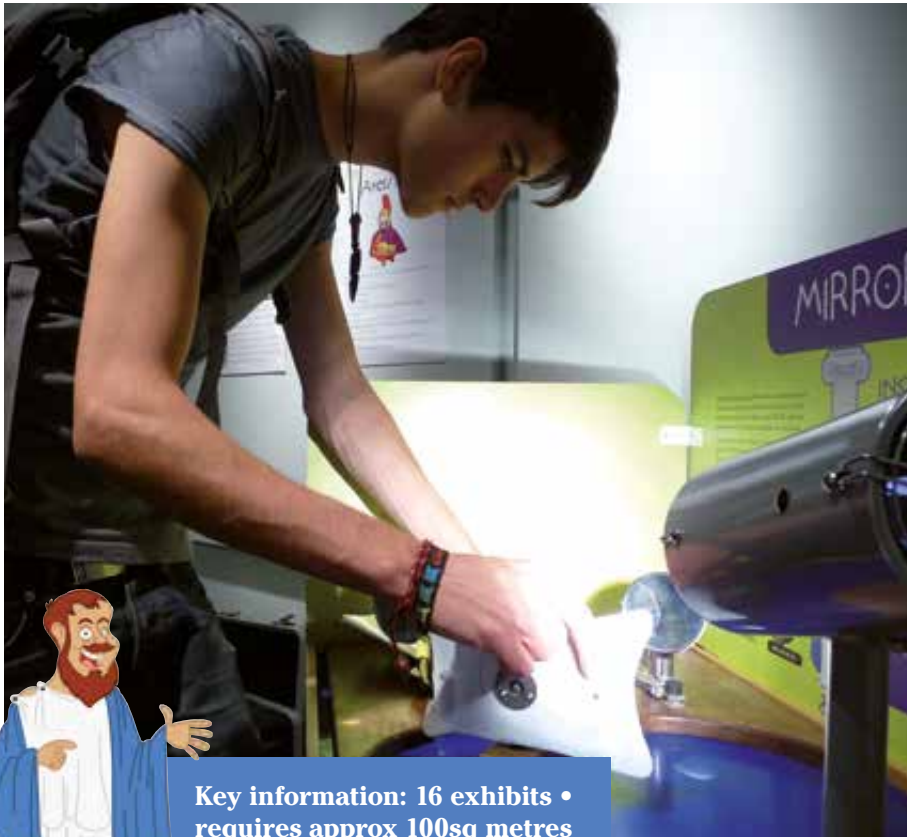






- Exhibits:
- Make a Mosaic
- Archimedes Screw
- Catapult
- Aqueduct
- Roman Arch
- Grinding Wheel
- Word Spinner
- South Pointing Chariot
- Signalling
- Archimedes Mirrors
- Mechanical Locks
- Musical Scales
- Hero's 5 Simple Machines

# ANCIENT WISDOM



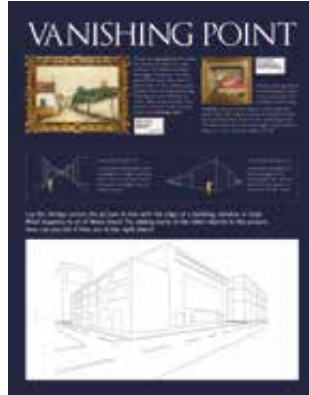
**Key information:** 16 exhibits •  
requires approx 100sq metres  
• requires 2 plug sockets • one  
exhibit contains water

*Kingston Museum, Surrey*

Find out what the ancients did for us. Shoot down a castle wall with a Roman catapult and see how the Egyptians locked their doors. Build an aqueduct to guide water to a village and try the Greek way of using the Sun to burn the enemy's ships. There is art and music as well and you can even write your name in hieroglyphics.



Reveals the techniques, tricks and trade of the art world from perspective to lighting, to composition. It looks into some of the major developments in the art world and how they shaped what people painted, how they painted it and what they painted with.



- Exhibits:
- The art machine
  - Draftsman's grid
  - Composition
  - Materials
  - Artist's glass
  - Vitruvian man
  - Colour combinations
  - Vanishing point
  - Date the art
  - Light and dark
  - Light up the art world
  - Hidden meanings
  - Anamorphic mat
  - Mixing colours



*The Observatory Science Centre, East Sussex*

**Key information:**

- 14 exhibits •
- requires approx 100sq metres •
- requires 5 plug sockets

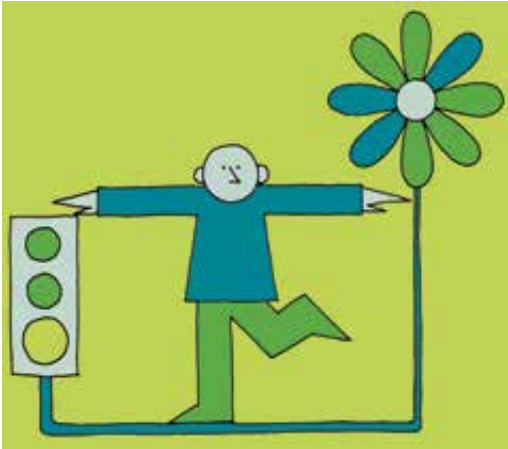
The Art Machine (right), lets up to three people squirt 'paint' from giant bottles onto a canvas which they can spin to create all sorts of realistic patterns and effects. Once complete, visitors can email their masterpieces to themselves.



*The Dali Experience, London*



**Key information: 16 exhibits • includes banneres • requires approx 100 sq metres • requires 9 plug sockets.**



Exhibits:  
Reaction tester  
Touch test  
Peripheral vision  
Stereo hearing  
Skulls  
Smell table  
Eye iris  
Hearing test  
Balance test  
Mirror drawing  
Delay phone  
Hot and cold  
Memory test  
Colour blindness & 3D pictures  
After-image / Secret message



# Senses

This exhibition gives visitors the chance to find out more about their senses and compete with others to see whose senses are sharpest.



# PUZZLES & ILLUSIONS

These puzzles and illusions give visitors an insight into how their brain works and are fascinating for all ages.

Phenakistoscope  
Bird in a Cage  
Triangles and Pyramids  
Cafe Wall Illusion  
Hollow Mask  
String Puzzles  
Moving Spirals  
Colour illusions  
Size illusion  
Colour-banded Snake  
3D Pictures  
Anamorphs  
Magic Writing  
Graphics Illusions



*Inspire Discovery Centre,  
Norwich*

**Key information: 15 exhibits • includes display banners • requires approx 100sq metres • no electrical power required.**



*Discovery, Łódz Poland*



*Great Conservatory at Syon House in Brentford, London*



**CABARET!**  
Mechanical Theatre

Exhibits:

- Cams
- Gearing
- Gears
- Linkages
- Drives
- Ratchets
- Lever
- Cranks

Automata:

- Capture your own U-Boat
- How to Swim
- The Barecats
- Poisoned Milk
- Camel Simulator
- Sleeping Musculature
- Three Physical Jerks
- Sheep Shearing Man
- Lion Tamer
- Allegory of Love
- How to Live: Spaghetti Man
- The Birth of Fast Food: Pegasus



# THE MECHANICALS



**Key information: 8 exhibits • includes banners • 12 automata • requires approx 100 sq metres • 12 plug sockets.**

The Mechanicals is an exhibition of two parts. Witty, beautifully hand-crafted automata are displayed alongside hands-on exhibits that help visitors to understand the basic mechanisms involved in making the automata work.

As well as explaining the automata mechanisms, the interactive exhibits also simplify and show the basic principles behind drives, pulleys, ratchets and levers that underpin our lives in so many ways.

The Mechanicals is a collaborative project with Cabaret Mechanical Theatre, famous for its collection of hand-made automata once occupying premises in Convent Garden but now touring the world in various exhibitions.



# MEDIEVAL MACHINES



The medieval period was one of great creativity and development. Many of the basic technologies which underpinned the renaissance and later the industrial revolution were first developed while at the same time innovations from Roman times were rediscovered and refined.

By giving people a hands-on opportunity to explore these technologies first-hand, the exhibition is intended to give people an insight into the roots of modern technology and the inventiveness of our ancestors. It will also help them gain a better understanding of history and how the innovations might have affected peoples lives in the period and after.

This exhibition is particularly suitable for history-based museums, historic buildings and visitor attractions.

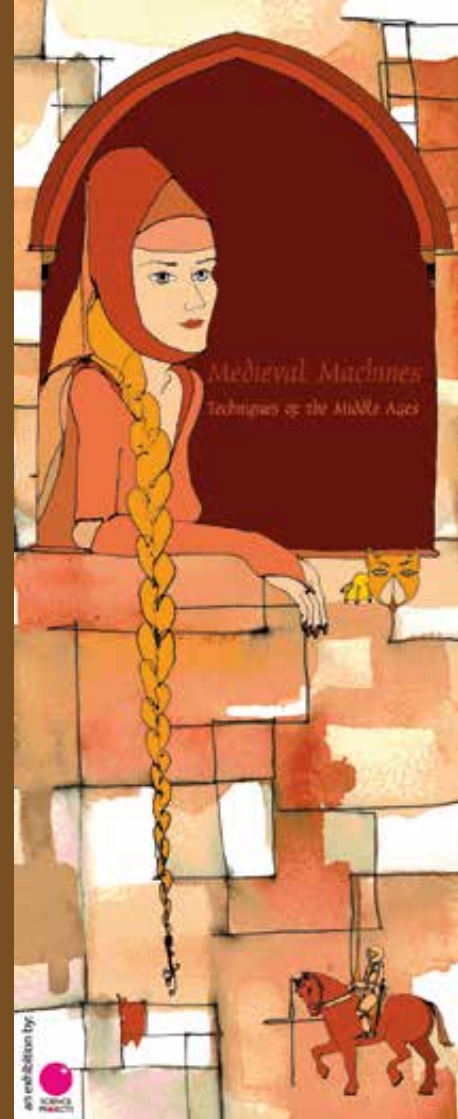
Exhibits:

Trip Hammer  
Water Wheel  
Windmill  
Siege Engine  
The Knight  
Stained Glass  
Arch

Flying Buttress  
Wooden Bridge  
The Compass  
The Loom  
Printing Press  
Clock  
Tiling

Inventions and Borrowings  
(spectacles, silvered mirror,  
hourglass, wheelbarrow, chain  
mail and the cannon)

**Key information: 15 exhibits • requires  
approx 100 sq metres • 4 plug sockets.**





Exhibits:  
Adding Colours  
Big Lens  
Anamorph  
Multiple Reflections  
Glow Paper  
Ghost  
Illusion Discs  
Light Music  
Mirror Drawing  
Plasma Globe  
Praxinoscope  
Spark Disc  
See Heat  
Zoetrope

*The Observatory Science Centre, East  
Sussex*

**Key information: 16 exhibits • requires approx 100sq metres • requires 9 plug sockets • some of these experiments work best in a darker area.**

# OPTICS



Experiment with lenses, lightning and luminosity and many other classic demonstrations on colour and optics. Also investigate how images merge into moving pictures in the zoetrope and praxinoscope, and how much your brain influences what you see.



# Life

What are we humans made of and what makes us tick? Use the models and the microscope to find out what goes on inside our body. And identify plants and animals and see how they fit into the Earth's environment.



Exhibits:  
Skeleton hand  
Human torso  
Digestion  
Sunflower  
Key  
Animal visions  
Animal sounds  
Fossil find  
Body parts  
Video microscope  
Reaction timer  
Balance  
Model eye  
Mirror drawing  
Model ear

**Key information: 15 exhibits • requires approx 100 sq metres of open floorspace • requires 5 plug sockets.**





## FINANCE

The cost of the exhibition is made up of two parts: the hire fee and the delivery/collection charge. All amounts are quoted exclude VAT.

The *delivery/collection* charge includes set-up, staff training, packing up and collection. It is calculated from the driving time between our workshop in London and your venue.

## ESSENTIAL INFORMATION

Each exhibition takes up about 80-100sq metres except Feel the Force, which needs about 150sq metres.

The exhibits are free-standing and can be arranged in many different ways.

Power requirements are minimal and extension leads can be provided.

Delivery is generally by a large transit type van but exhibitions for overseas may be crated and freighted.

During the set up and take down of the exhibitions we need you to provide two people able to help carry and assemble the exhibits. In addition, those staffing the exhibition will need to be available for training at this time. It is useful if some of the staff are also the helpers, so they can learn about the exhibits as they are set up.

## HOW TO BOOK

For latest details of availability and cost, please contact our Outreach Co-ordinator who is based at our Science Centre in East Sussex.

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