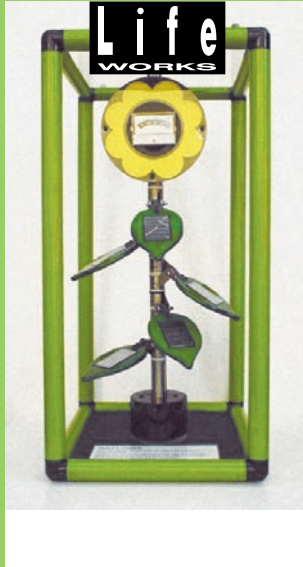


ScienceWorks

Hands-on science exhibitions
designed for schools

Electricity
WORKS



FORCE
WORKS



*Educational,
stimulating
and fun*

LIGHT
WORKS



Development of ScienceWorks

"To hear is to forget, to see is to remember, to do is to understand".

This phrase sums up the philosophy behind the 'Hands-on' science movement. The ScienceWorks project (originally SchoolWorks) began in response to teachers who recognised the potential of hands-on exhibitions and asked if equipment could be developed for use in the classroom. Over a period of years a system and its method of operation was developed and tested in schools throughout the UK. It now operates day-to-day on a self-funding basis.

Improving the image of science

ScienceWorks increases motivation and enthusiasm among both staff and pupils and improves the image of science in the school. The exhibits give the user control over what they are investigating, which aids confidence.

An aid to understanding

The exhibits address a balanced selection of points from each main topic of the curriculum. The equipment is intuitive and children quickly grasp what to do. There are simple labels on the exhibits giving instruction. The exhibitions are accompanied by Teachers' Notes which suggest a number of suitable questions and provide answers. They also recommend more things to do and give background scientific ideas.

The activity-based approach is particularly suitable for primary aged children. The multi-sensory nature of the experiences provides a broad foundation for the development of more advanced ideas later on.

Skills and processes

Each exhibit incorporates a series of 'hooks' which stimulate curiosity – leading to action. The equipment is versatile and can be used in a variety of ways appropriate to different ability levels. The exhibitions widen the range of evidence with which children may challenge their existing ideas about how and why things happen. Communication skills are stretched during sessions as pupils discuss what they are doing, and afterwards as they describe their experiences.

Science Projects Ltd

ScienceWorks is operated by Science Projects – an educational charity whose aim is to promote the public understanding of science through the medium of hands-on exhibits. As well as ScienceWorks we also hire out travelling exhibitions to museums, and manufacture hands-on exhibits for museums and science centres.

Aims and Applications

Key stage 2

The exhibitions have been specially developed for use in primary schools to assist in the teaching of the national curriculum at key stage 2. These pupils respond particularly well to the activities.

Key stages 1 and 3

Pupils at key stage 1 enjoy the exhibits and are stimulated by them. Many primary schools organise short sessions for infant classes and treat the exhibition as a whole school event.

The exhibition content is also relevant at key stage 3. Secondary schools may host an exhibition in conjunction with their feeder primary or middle schools. This offers improved schools links and an opportunity to share ideas. It is also excellent PR for the host school.

Special schools

The flexibility of the exhibition and the direct sensory experience it contains make ScienceWorks particularly suitable for special schools. The exhibitions are also suitable for pupils with poor reading or those for whom English is a second language.

Teachers and INSET

Teachers find the exhibitions helpful to their own understanding and confidence in science activities. Schools may consider booking the exhibitions to coincide with an INSET day.

Parents and governors

After-school sessions for parents and governors are very popular. These events are typically well attended and help to improve parents' awareness of school and curriculum issues.

Public events

The exhibitions can be used singly or several sets can be combined to make effective attractions suitable for public events of all kinds. They are ideal for science festivals, national science week events, and as temporary exhibitions for local museums. They can also be used to raise money as part of a fund-raising event in the school.



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Exhibitions

*There are seven sets of exhibits,
based on the main areas of the science curriculum.*

LightWorks

Mixing coloured light • Mirror drawing • Laser amazer • Zoetrope • Model eyes • Light table • Anamorphs • Pinhole cameras • Frozen shadows • Bendy mirrors • Optical fibres

SoundWorks

Teachest bass • Model ears • Wave machine • Resonance • Ear clangers • Echoes • Speaking tubes • Ticking clock • Bucket radio • Artificial vocal cords • Sound bouncer

MaterialWorks

Types of materials • Compression bottles • Viscosity • Video microscope • Surfaces • Inappropriate materials • Atoms • Filters • Mixing • Flow • Insulation

LifeWorks

Skeleton hand • Digestion • Animal sounds • Key • Reaction timer • Balance • Body parts • Human torso • Video microscope • Solar flower • Animal vision • Fossil find

ForceWorks

Centre of gravity • Balance table • Pressure • Pulleys • Magnets • Resolution • See stress • Skid test • Spinning tops • Magnetic pendulum • Direction of forces • Structures

ElectricityWorks

Conductors • Bulbs and switches • Circuit tester • Generator • Resistance • Circuits • Safety talk • Magnets and electricity • Electromagnet • Static electricity • Morse code • Human battery

EnergyWorks

Energy system: Generator • Light • Sound • Heat • Movement • Solar power • Wind power • Save heat • Energy game • Temperature sensor

ScienceWorks

**Hands-on science exhibitions
designed for schools**

For further information about booking and exhibition details contact:

ScienceWorks **Tel:** 020 8741 7437 **Fax:** 020 8741 2307

Science Projects, 20 St. James Street, Hammersmith, London W6 9RW

Website: www.science-projects.org