

Taking its inspiration from the banquet scene in Charles Dickens' classic novel, *Great Expectations: New British Design Stories* is a feast of design excellence showcasing over 50 British leading-edge design products and projects. Arranged on a vast glowing table, architecture, fashion, product and web design, interactive media, software, graphics, film and TV are accessed through objects, models and screen based presentations. Visitors are encouraged to go beyond the objects, to discover the stories behind them and to consider the relevance of design in their own lives. Speakers and screens set into the chairs and monitors and keyboards arranged around the table, provide multi-layered access to information that 'opens up the process of turning ideas into products and services through the combination of invention, innovation, design and creativity'.

*Great Expectations* highlights the wealth of products whose market success depends on the interplay between design and new technologies. It also reveals that creative design is the way of the future, that the quickly changing pace of contemporary technology will be increasingly dependent on innovative design for its success and relevance in the marketplace.

This exhibition is relevant to high school students of Design and Technology, Visual Arts (years 11 & 12), as well as tertiary students of design, architecture, interior design, graphic design, fashion design and product design.



**'what goes down ...must come up' laundry basket.**

**El Ultimo Grito**

**Hidden**

Seldom do such day-to-day items as the laundry basket inspire innovative design solutions. Yet when the London based design trio El Ultimo Grito set about designing 'what goes down...must come up', their main concern was in redressing two glaringly obvious issues. The first revolved around the simple question, how many dirty clothes make up five kilograms? Most people have no idea, yet the instructions on detergent packaging usually read something like: 'use one cup of detergent for each five kilogram load'. The second issue was deep basket affliction: a single sock stubbornly stuck to the bottom of the basket, difficult to reach without a contortionist's skill. The combination of the two led El Ultimo Grito to their innovative solution. The 'what goes down...most come up' laundry basket works on a simple spring system which moves down as it is loaded. The mechanism reads the weight of the total load, halfway down – five kilograms (one load), completely down – ten kilograms (two loads). Conversely, as the laundry basket is emptied the spring rises, lifting the bag and its remaining contents. Laundry baskets are generally designed to have depth of space, not depths of imagination. El Ultimo Grito's 'what goes down...must come up' laundry basket offers a typically humorous but simple and ingenious alternative, demonstrating how a user-led design process can reinvent an often overlooked product.



**Titan washing machine**

**TKO Design**

**Monotub Industries**

After initial research and concept design, Martin Myercough founded the company Monotub in order to manufacture his new designs. He teamed up with the London-based consultancy TKO Design to turn his ideas into an effective and desirable mass-market washing machine. His invention, the Titan, has taken five years, fifteen prototypes and four separate market research surveys to evolve into its final form. The Titan claims to fundamentally rethink washing machine technology. The angle of the drum – inclined rather than horizontal – means that the machine can be interrupted mid-cycle so that garments can be added or removed without causing a flood. Meanwhile, the drum itself removes to double as a plastic washing basket making loading, unloading and carrying laundry a much easier task. The interior of the Titan offers 40% greater wash capacity and it weighs each load of washing and automatically adjusts the amount of water needed.



**“It isn't about novelty. The Titan has to be familiar enough to be recognised as a washing machine. It was vital that we communicated its benefits in a form which still felt comfortable to ordinary users and filled the dimensions of an ordinary kitchen”.**

**Annie Gardener  
TKO Design**

**Focus Questions**

1. Great Expectations showcases the best of British design. Pick three products/designs and discuss why you think these have been included in this exhibition.
2. Discuss why one of the above products would be successful in your home.
3. Innovation is often part of the design process. List the innovations which were developed for the two products described above. Select another common household product and consider how it might be improved. What advantages would these improvements have for the user.

## Cellopore

### UCB Films-Osmotics Division

Cellopore is a simple, self-contained and easy-to-use product which enables anyone to produce biologically safe water and food from almost any available water source, even a muddy, cholera-infected puddle. It uses proven cellulose technology in a totally new way. Sachets containing natural sugar are formed from special cellulose film. When placed in the contaminated water, the sugar draws the water in by osmosis. Over a period of about five hours the Cellopore sachet fills with one litre of water. The film acts as a filter excluding more than 99.9% of all known bacteria, viruses and silt. Cellopore is available in both single and double sachets. In the double sachet construction a range of different products, including infant milk, foodstuffs and oral medicines, are contained in the upper part of the sachet. This enables them to be reconstituted without the risk of contamination.

This humanitarian product is suitable for emergency situations such as flooding, as well as for travellers to Third World countries. Not only is the sachet portable, dry, lightweight and compact, but it is also biodegradable so it can be discarded with minimal risk to the environment.



## Intraject

### Weston Medical

Many people have a real aversion to needles but have little alternative in the way their medication is administered. Intraject, from Weston medical, offers a radically different solution. Designed and made in Britain, Intraject is a pre-filled, needle-free device for injecting liquid medicines. Although needle-free technology was first developed sixty years ago, the majority of devices available are both expensive and difficult to use. Intraject uses a compact nitrogen gas source to propel a pre-measured quantity of a drug through the skin into the subcutaneous fat. The injection takes fifty milliseconds and feels like a finger flick on the back of your hand. The device can easily be used for self-administering drugs as it requires no specialist medical training for use and is comparable in price to a normal syringe. Once used, Intraject can be safely disposed. There is no residual pressure left in the device and there is no danger of contamination as the skin has not been broken. The improved quality of life that Intraject offers to people, who regularly need, or have a reaction to, needle-based injections, will be astounding. Similarly, Intraject offers better safety standards for medical staff by eradicating the threat of needle stick injury, currently the biggest cause of injury to healthcare workers. At Weston medical the company scientists are working on new versions of the device as well as new drug delivery systems. Future developments, including the delivery of variable doses for diabetic insulin injections and the administration of reconstituted powder drugs, all aim to improve the quality of life for patients around the world.



**“Water is fundamental to life,  
Cellopore rehydrating sachets give the  
assurance of good quality water  
wherever and whenever it is required”**

**Bill Lowther  
UCB Films**

## Focus Questions

1. Explain how one of the above products meets the principles of ethical design.
2. Discuss the likely social, economic or environmental impacts (positive or negative) of one of the above products.
3. Select one of the above products and prepare a design brief. Consider what the project/product is for, the users, any limitations or restrictions in its manufacture or use and any social or ethical considerations.

## Storage Jacket

### Keep on Moving concept garment

#### Intelligent Fibres Division, Philips Design

The merger of consumer electronics and clothing is not just a question of combining technologies but also of blending two entirely different cultures. For the electronics industry it requires an understanding of issues such as style, design and materials. For the fashion designer it forces them to think beyond the cut and drape and to adapt the aesthetic of the garment to meet its functional requirements. In the late 1990s, Philips Design instigated a fresh approach to future lifestyle and fashion by creating a multi-disciplinary team to look at the integration of electronics into clothing. Now, with its London-based Intelligent Fibres Division, Philips Design hopes to draw on a wide scope of British talent and cultural influences to develop embedded functionality in a variety of products. Two examples from the Intelligent Fibres Division, the Storage jacket and the Keep on Moving Concept Garment, explore how innovation and technology can enhance the future quality of life. The 'Storage Jacket' is a state-of-the-art garment. Worn as a hands-free electronics jacket, it features a mobile phone and an MP3 player neatly tucked into storage pockets. The jacket also folds down into a bag which can be worn over the shoulder like a courier's bag. The pockets remain on the outside so that the mobile phone and MP3 player can still be easily accessed. The Moving Concept Garment responds to the desire for quality audio entertainment while exercising. Through MP3 technology, it is possible to create integrated audio entertainment that will not 'jump' with movement and is also designed to track performance. Using the processing power of the digital audio player, functions could be added that improve the performance of the athlete. The 'Virtual Coach' for instance, monitors and regulates the pace of training. A training log and performance analysis derived from a series of biometric sensors is then fed back to other computing devices in the home. This intimate understanding of physical performance and detailed management of the training schedule greatly enhances the way people experience exercise. Embedded functionality will not only transform the fashion industry, but will also have far-reaching implications for all industries that use textiles – eg transportation, home furnishings and furniture. The potential is enormous and for the Intelligent Fibres Division of Philips Design the exploration of clothing is just the beginning.



**“We started asking why are people strapping Tupperware boxes on their bodies, carrying around all this RAM and data and not caring about the material or design of the clothing. Surely we should embrace all these things? We were very interested in looking at the more sensorial side to the design of functionality on the body, so we did just that.”**

**Nancy Tilbury  
Intelligent Fibres Division, Philips Design**

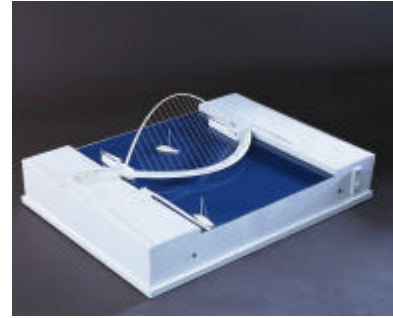
## Focus Questions

1. The Intelligent Fibres Division of Philips Design describes the melding of textiles and electronics as 'embedded functionality'. What do you think this means and what could be some possible ways this technology could be used in the future?
2. Collaborative design is about working as part of a team. The Intelligent Fibres Division of Philips Design talks about marrying different cultures in the development of its new technology. Identify the separate industries involved in developing these new textiles and describe what their roles are on the design team. What are some of the problems that this kind of collaborative approach might have?

## Gateshead Millennium Bridge

### Wilkinson Eyre

Gateshead Millennium Bridge provides an elegant new crossing over the Tyne, a river famous for its bridges. The design by Wilkinson Eyre Architects with engineers Gifford and Partners represents an outstanding new comment on the continuing engineering prowess being exhibited in the north-east of England. The main functional requirements of this project were to retain a clear channel for shipping whilst maintaining a low level crossing for pedestrians and cyclists. The brief called for a design that recognised the importance of geographical context in an area characterised by its bridges. Bridges that open offer spectacle yet they are rarely spectacular. In contrast, this bridge has visual appeal and grace in its closed position, giving way to the theatre and power of the opening motion which is reminiscent of a blinking eye. The 105 metre (344 foot) span of the bridge embraces architecture and culture as a tool for urban regeneration. The project, promoted by Gateshead Council, links the new arts and cultural development on the Gateshead Quays with the newly developed Newcastle Quayside on the other side.



## Super Voyager and Virgin Pendolino

### Priestman Goode

Product, environment and transport designers Priestman Goode were appointed as lead consultants to design the two new fleets of trains (50 x 225km eight-car diesel electric trains and 75 x four-car 201km diesel electric trains). The design brief was to translate Virgin's brand identity into all aspects of the passenger experience, from the exterior nose to the entire interior including windows, doors, seating, shops, galleys and saloons. The design language evolved from the aerodynamic nose - a clean, fluid form evocative of classic British racing cars. While the initial Design work was carried out in consultation with the Virgin New Trains Team, the translation of the concept through to production involved a long and interactive design process between Priestman Goode, both manufacturers and their suppliers. This ultimately led to independent appointments by Priestman Goode of a number of suppliers to design new equipment specifically for these trains. The overall train interior is unique to Virgin and the inclusion of on-board shops demonstrates a major point of departure from other operators. This reflects Virgin's aspiration to transform uninspiring buffet bars into a retail experience - selling everything from quality coffee to music. The consistent level of design detailing throughout was driven by Virgin's commitment to address the specific needs of its passengers. For example, passengers of the twenty-first century want to be on-line and so Virgin installed on-board computer power points. The first Cross Country Voyager went into service in May 2001 and it was followed by the Super Voyager in 2002. Virgin aims to restore the on-board pleasure of train travel - not just to improve it visually, but to make a fundamental difference to the passenger's rail experience.



**"You can't get a much bigger product than a train. This was a fantastic opportunity to look at the train as a moving environment rather than a series of individual components. It was a chance to create a three-dimensional manifestation of the Virgin brand."**

**Paul Priestman  
Priestman Goode**

### Focus Questions

1. In assessing the significance of an innovation, it is useful to consider the outcomes for users, the organisation introducing it, the region, industry or nation where it was introduced as well as similar projects in other locations and/or environments. Discuss how these factors were considered by the designers of the above projects.
2. Many organisations are now realising that good design is a vital part of the development and marketing of their products and/or projects. Select one of the above projects and describe how its design has been an integral part of its success.

## Qoffee\_Stool

### Rainer Spehl

The Qoffee\_stools were initially developed as a competition entry for public seating at the Tate Britain Gallery in London. Numerous research visits to the gallery focused Rainer Spehl's interest in how and to whom art was presented. The experience of having coffee in the cafeteria or rummaging through the gallery shop seemed equally important to spending time in exhibitions. In this instance, art was being made accessible to a mass audience. Spehl incorporated these observations into his design and produced a product that connects art and design, can be mass produced and available to a large number of people. He started experimenting with different aspects of the everyday throwaway plastic cup - an iconic and familiar object with a strong connection to mass production. Lack of financial resources forced Spehl to find a resourceful solution to mass manufacturing process. Simple rotational moulding costs a tenth of the price of injection moulding but had generally been used in applications where the visual quality of the project was not important. The high quality of the final result is testimony to the success of this designer-maker.



## Jack Lamp

### Tom Dixon

#### Eurolounge

Tom Dixon's 'Jack' challenges existing expectations of domestic objects by allowing the user to decide what it could be. It is a non-specific, internally lit module that can be stacked, used as a floor lamp, seat or table base. The adaptability of this object offers a premium solution to the urban problem of lack of space. Dixon employed the simplest of manufacturing technologies for its mass production - eg rotation moulding. This technique is also used in the production of British street bollards which, like the Jack, are internally lit. Moulded in one piece from four kilograms of low-density polythene, the Jack was designed for durability and longevity. Jack's creation marks the changing role of the designer in transforming and interpreting everyday objects into cultural icons.



**The Qoffee-stools highlight perception of value, familiarity and scale. They are designed to be simple and intriguing. Playing with scale sparks surprise and recognition in this everyday, throwaway product"**

**Rainer Spehl  
Designer**

## Focus Questions

1. Inspiration is just one element of the design process. Select one of the above and describe what the principal inspiration was and how it influenced the final design.
2. Discuss how you would go about researching and gathering information as part of the design process for one of the above products.

## Other design exhibitions at PHM

### ***Colonial to contemporary: a decade of collecting Australian decorative arts and design***

View a diverse range of the museum's acquisitions dating from the early nineteenth century to the present. From rare colonial silver to posters created for the Sydney 2000 Olympic Games, this exhibition celebrates Australian creativity. The domestic objects we have designed and made decorative and utilitarian are uniquely placed to reflect and reveal much about our distinctive history and culture. Australian decorative arts and design, collected by the museum for over a century, are fundamental to this story.

General admission: Adult \$10, child/concession \$3 and family \$23. Members, Australian Seniors Card holders, aged pensioners and children under 5 are free.

### ***Lace Study Centre***

Visit the Lace Study Centre to view different styles of lace from all over the world, independently research pieces in the Powerhouse Museum's collection and find out more from the volunteer lace enthusiasts who staff the centre. Everyone with a passion for these intricate and extraordinary textiles is invited to use this unique resource, including lace makers, embroiderers, students and designers.

General admission: Adult \$10, child/concession \$3 and family \$23. Members, Australian Seniors Card holders, aged pensioners and children under 5 are free.

### ***Balarinji: ancient culture, contemporary design***

The original trailblazer in Indigenous based design is showcased in the work of Balarinji, an innovative contemporary design company, created by designers John and Ros Moriarty. Balarinji has been expanding the repertoire of Australian design for 20 years, covering areas as diverse as jet design for Qantas and Paris fashions.

Sponsored by the Australian Graphic Design Association (AGDA).

Until 1 June, 2004. General admission: Adult \$10, child/concession \$3 and family \$23. Members, Australian Seniors Card holders, aged pensioners and children under 5 are free.

### ***Australian Design Awards 2003***

View the Powerhouse Museum's selection of cutting-edge design products from this year's Australian Design Awards. Selected products include first applications of new technology such as the Betachek G5 Diabetes Monitor, and redesigns of Australian 'design icon' products such as the Sunbeam Mixmaster.

The Australian Design Awards organisation is part of Standards Australia International.

Until 31 May, 2004. General admission: Adult \$10, child/concession \$3 and family \$23. Members, Australian Seniors Card holders, aged pensioners and children under 5 are free.

### ***FRUiTS: Tokyo street style – photographs by Shoichi Aoki***

Featuring over 70 colourful portrait photographs by Japanese photographer Shoichi Aoki taken in the fashionable Tokyo suburb, Harajuku, from 1997 to 2002. Shoichi Aoki's photos document 'a fashion revolution in Tokyo's suburbs'. This street style was adopted by young people and involved customized traditional Japanese dress, 'DIY' designs and alternative designer fashions.

Until January 2004. General admission: Adult \$10, child/concession \$3 and family \$23. Members, Australian Seniors Card holders, aged pensioners and children under 5 are free.

### ***Treasures of Palestine***

This beautiful exhibition showcases a selection of traditional material ranging from costumes, embroidery, jewellery and ceramics to mother-of-pearl inlay work, posters, photography and olive-wood sculptures.

From 17 October. General admission: Adult \$10, child/concession \$3 and family \$23. Members, Australian Seniors Card holders, aged pensioners and children under 5 are free.

### **Websites:**

[www.designcouncil.org.uk](http://www.designcouncil.org.uk)

[www.hidden.nl](http://www.hidden.nl)

[www.monotub.com](http://www.monotub.com)

[www.tkodesign.co.uk](http://www.tkodesign.co.uk)

[www.dyson.com](http://www.dyson.com)

[www.priestmangoode.com](http://www.priestmangoode.com)

[www.films.ucb-group.com/osmotics](http://www.films.ucb-group.com/osmotics)

[www.weston-medical.com](http://www.weston-medical.com)

[www.design.philips.com](http://www.design.philips.com)

[www.wilkinsonre.com](http://www.wilkinsonre.com)

[www.tynebridgewebcam.com/webcams.htm](http://www.tynebridgewebcam.com/webcams.htm)

[www.eurolounge.co.uk](http://www.eurolounge.co.uk)

**Please note** : these websites were available and suitable at the time of publication. We advise teachers check sites before recommending them to students.

Bookings are essential for all education groups.

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Powerhouse Museum online: [www.phm.gov.au/education](http://www.phm.gov.au/education)