

Creating science learning spaces for the future

Simon Quinnell
Miranda Stephenson
National Science Learning Centre

Science
LEARNING CENTRES



National Science Learning Centre

Opened in York in November 2005. It provides the highest quality professional development for teachers and technicians of science from across the UK.

The Wellcome Trust is providing £25 million to fund the Centre.

We aim to promote increased enjoyment, attainment and retention in school science.



Today's Audience

Have we representatives from:

Schools

Local authorities

Architects

Others?

Science
LEARNING CENTRES



Lab images





S+B Mercury + Saturn

Science
LEARNING CENTRES





Science
LEARNING CENTRES





Yorks + Humberside SLC

Science
LEARNING CENTRES





ESA

Science
LEARNING CENTRES





Science
LEARNING CENTRES







Reaction!

Seeing the previous images, discuss with your neighbour:

- 1. What you most liked about some of them?**
- 2. What caused you concern about some of them?**



What characterises inspirational science teaching?



What characterises inspirational science teaching?

Variety:

- Investigation and practical work: individual, group, demonstration
- Projects
- Discussion: whole class, small group
- Role play & simulations
- Use of ICT by all – investigation and research
- Range of subjects: astronomy, biology, chemistry, earth science, physics, psychology



Supporting new developments in science education accommodation

Project Faraday

- Set up as part of the DCSF (DFES) strategy to encourage more students to study science post 16
- Addressing the governments 10 year science and innovation framework 2004-2014 which states
“The policy priority is to improve the state of school science accommodation by making schools science labs a priority”(6.23)
- To review the BSF and academies exemplar school lab designs to ensure they reflect the latest thinking



Project faraday

- Main objective was to develop exemplar science accommodation designs to inform others
- This included designs for 6 school renewal science departments all BSF one path finders schools
- Designs for refurbishment of 6 science departments
- Designs for a series of interactive experiments which may be used in some of the 12 schools



Project faraday

- Three design teams were appointed to work with 2 renewal schools each and with the refurbishment schools
- The teams consist of designers, architects and educational specialists. This was accompanied by a project steering group made up of representatives from science institutions, education groups and DCSF teams
- As demonstration projects the 12 Faraday schools will act as a local resource and real life exemplars nationally
- The first refurbishment project is due for completion end 2008 with the last renewal school in 2011

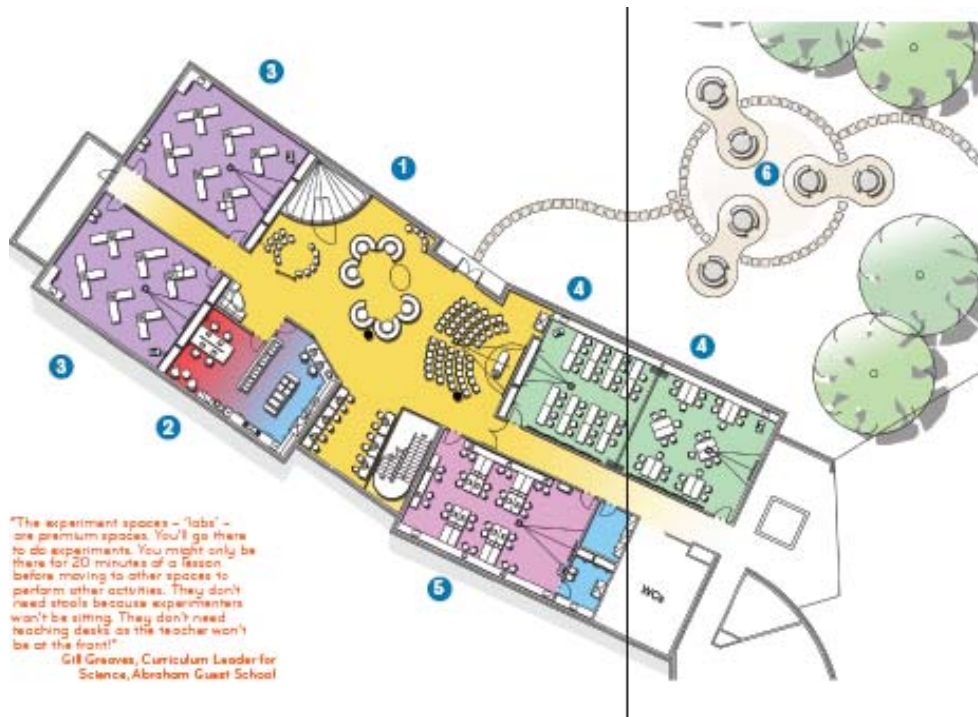


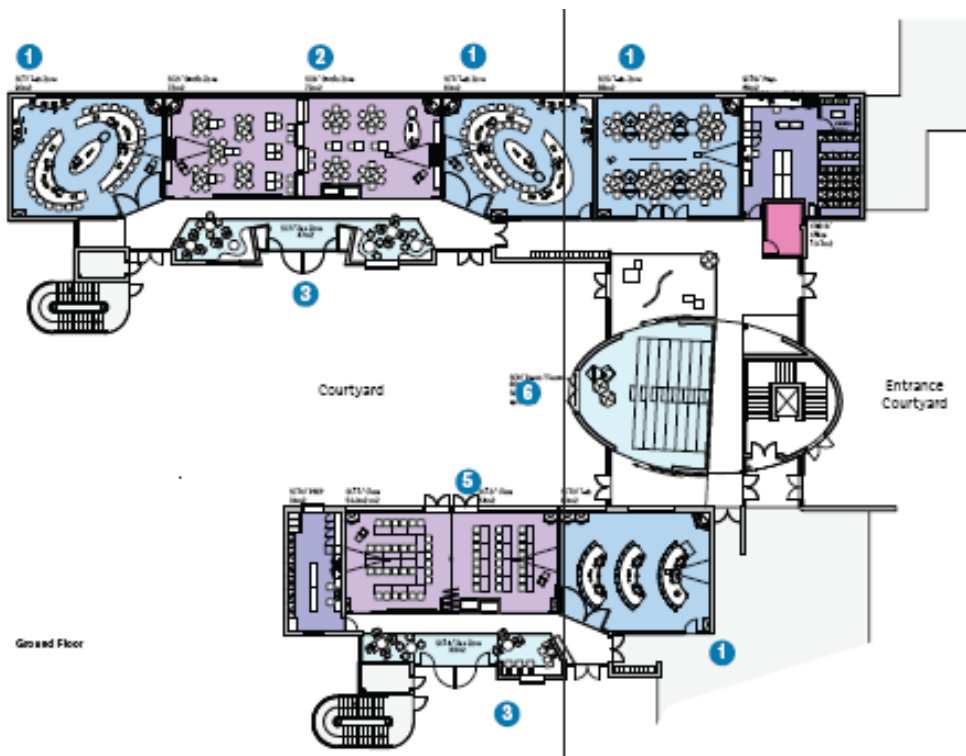
Five major themes have emerged from the project

- New settings for science
 - Managing transition and change
 - getting the most from technology
 - Science across the whole campus
 - Beyond the school gates
-
- The report will be published by TSO early this year



Examples from the renewal schools

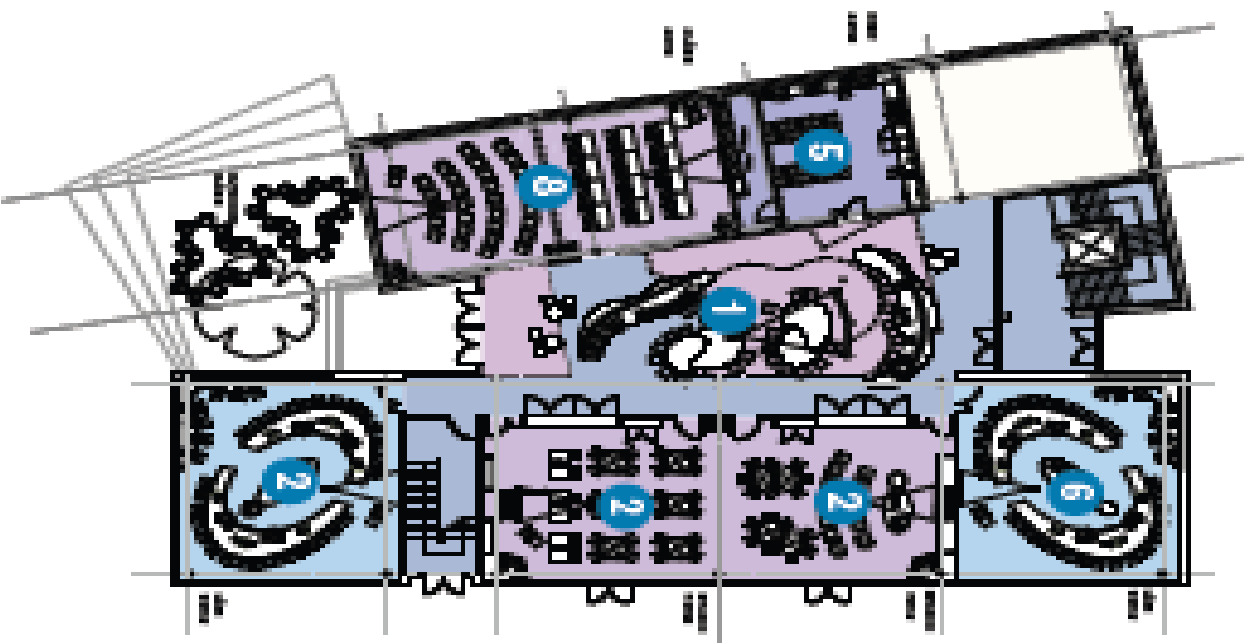






Science
LEARNING CENTRES





Science
LEARNING CENTRES

Areas to support activities

The learning environment

- How will the environment be used?
- Key: flexibility and ease of use

Supporting areas: prep room, storage and staff spaces



Labs for Learning: Design of science accommodation for teaching and learning

- Residential course at the National Science Learning Centre 2.5 days
- Target audience of heads of science, science teachers and technicians, LA advisors, architects, senior leaders and any one involved with a school or college science accommodation refurbishment or new build
- Input from experienced teachers and technicians, science advisors, faraday teams, designers and partnerships for schools (BSF).
- Looking at the needs of all end users **pupils**, teachers, technicians etc



Course content

- input, support and research as to what is needed in order to create environments which enhance teaching and learning
- the development of specifications and designs for each participant's needs
- engagement with experts such as designers, advisers, laboratory manufacturers and suppliers
- an exploration of the range of materials, furnishings and equipment available
- consideration of health and safety requirements.
- an overview of new developments and policy concerning science accommodation in schools





National Science Learning Centre



Find out more about the network of Science Learning Centres at www.sciencelearningcentres.org.uk

Science
LEARNING CENTRES



Contacts

- Science Learning Centres website
www.sciencelearningcentres.org.uk
- National Centre Senior Laboratory Technician and Professional Development Leader Simon Quinnell
s.quinnell@slcs.ac.uk
- National Centre Deputy Director Miranda Stephenson
m.stephenson@slcs.ac.uk



In conclusion

Henry Ford used to quip that that when asked what people wanted in the way of transport, they were likely to respond with “a faster horse”.

Evidence to House of Commons Education and Skills Committee: Sustainable Schools 2007

