



welcome / selamat datang

South East Asia International teacher's
conference

Kevin Jones and Mary Southall

www.attainmentpartnership.org.uk

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design education in the UK: raising standards

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Kevin Jones

- senior teacher
- AST
- 98 taking A. level design and technology
- SSAT National Subject Leader: Technology Colleges



Mary Southall

- senior teacher
- AST
- 100% grade A's at A. level
- commissioner teacher: London Challenge



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what do we do?

- Working in a variety of schools **every week**
 - The **Design Museum** (write and deliver secondary CPD)
 - The **Victoria and Albert Museum** (write and deliver secondary teaching and learning materials for design and technology)
 - The **Design Council** (member of the national 'Design Skills' advisory panel and chair of schools steering group) including chief moderator **Design Mark**
 - Specialist Schools and Academies Trust **SSAT**
 - Qualifications and Curriculum Development Authority **QCDA**
 - **IET Faraday** STEM materials (write and deliver)
 - Detroit area Education Department, USA
 - Buffalo State University, New York USA
 - **D&T Association** (write publications, deliver presentation, deliver CPD)
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we're not here to give answers, we're here to
generate debate and suggest ways forward

any questions, feel free to ask at any point

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National context - then, now and what next!



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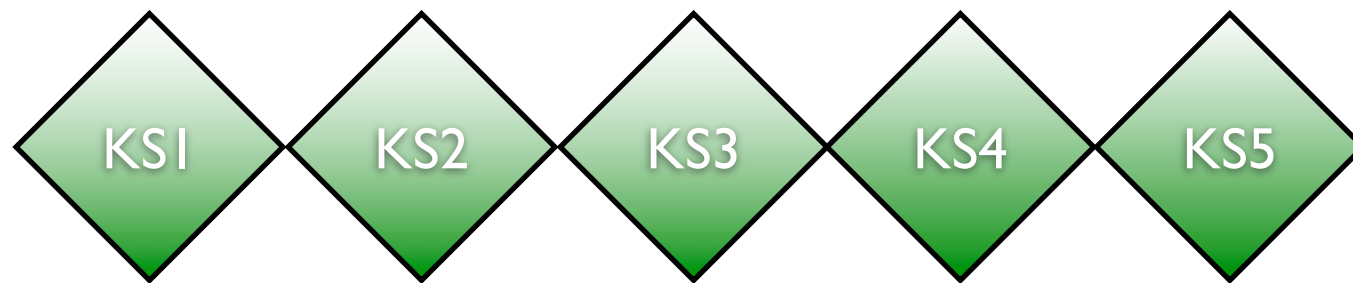


national context: history





National context



- England was first country to have a design based curriculum compulsory for ages 5-16
- now optional at post 14, KS4 (complacent?)
- progression of learning should be paramount
- important to build on the good practice of leading primary schools

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‘our children don’t like
designing they only like
making!’

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issues facing design and technology

- all things to all people
- still an infant in terms of other subjects: no single bedrock!
- many teachers still struggling with what it is, lack of professional development
- too many key bodies with self interests





national context

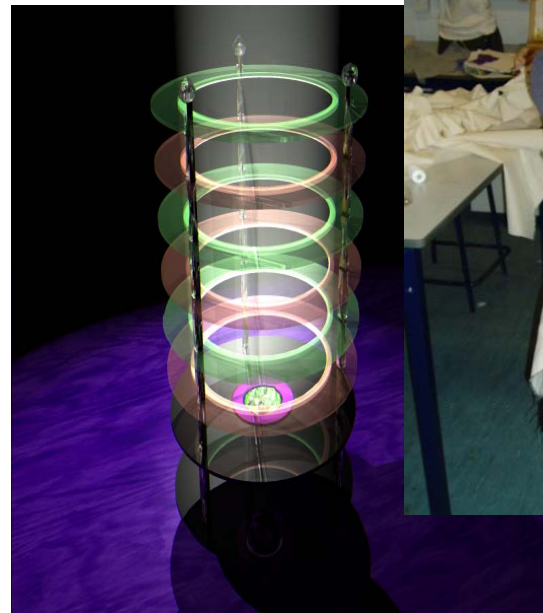
design and technology: what is it?

- product design (resistant materials - wood, metal, plastic)
 - fashion design (textiles)
 - graphic design (communication)
 - systems and control / electronics
 - food
 - engineering
-



design and technology? a shared vision!

- making
- thinking
- materials
- ideas
- communicating
- experimenting
- modelling
- products
- people
- history

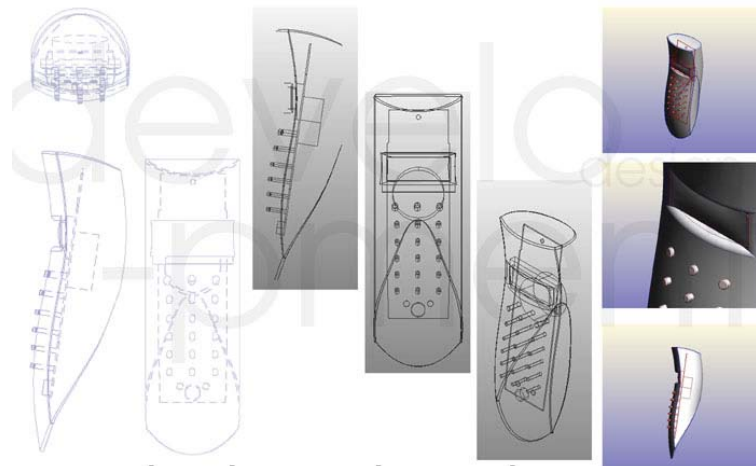


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issues surrounding the teaching of design

- rotation systems
- passion for 'design'
- make first design, then do rest of folder
- lack of emphasis on designing
- jumping through hoops
- lack of development
- appropriate / desirable projects
- little structure to designing

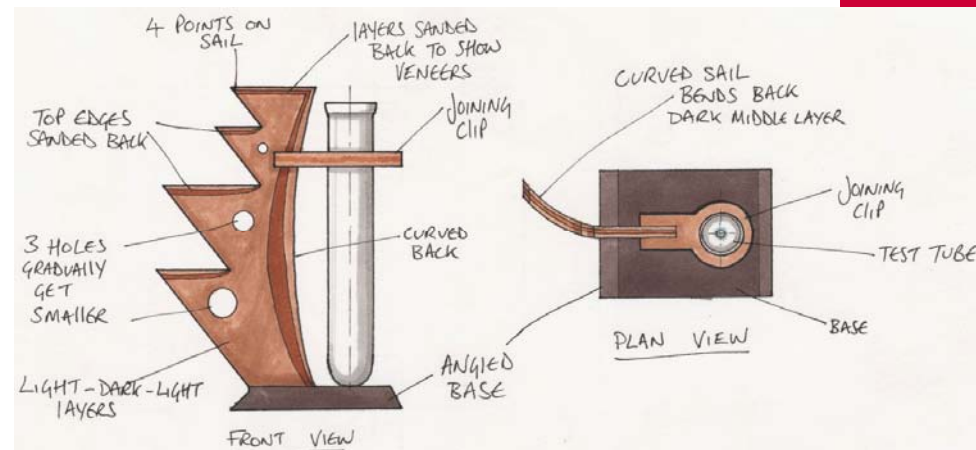


design development



Improving performance - design and technology

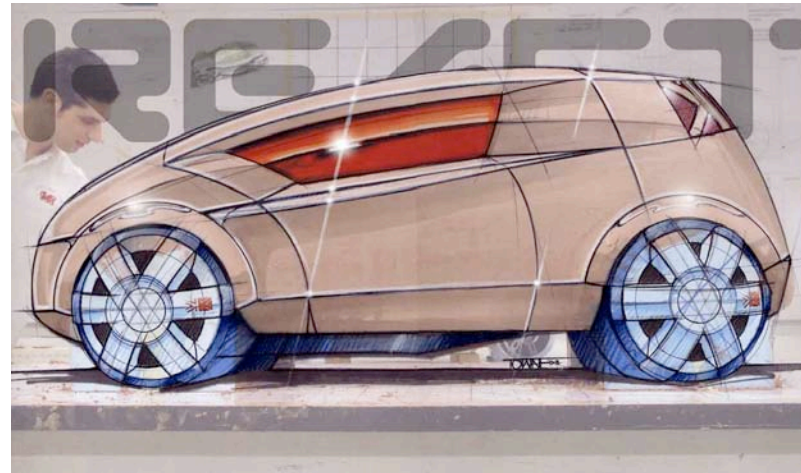
- teach 'how' to design!
- smart use of data
- positive learning environment
 - celebrate student work
 - celebrate professional design
- teachers to be knowledgeable about contemporary design





Improving performance - design and technology

- shared vision
- KS3 (11-14yrs) rotation
- Y10 (15yrs) delivery
- GCSE (14 - 16 yrs) coursework
- formative assessment





national strategy

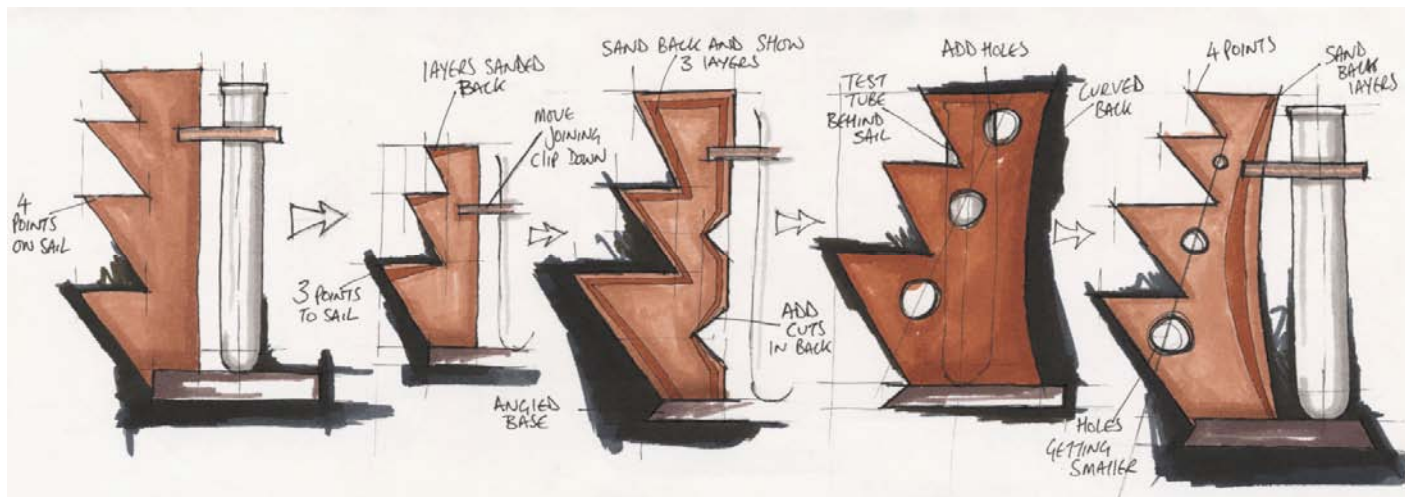
- first form of professional development to help teachers teach 'design'
- provides creative approaches to designing
- looks at assessment and progression





design process

- students really need to understand the process of designing?
- they need to know how the different elements fit together?
- and they need to understand the 'big picture'?



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product analysis (cafe que)

- **c**ost
- **a**esthetics
- **f**unction
- **e**rgonomics
- **q**uality
- **u**ser
- **e**nvironment





design history



arts and crafts



art nouveau



memphis



bauhaus

art deco





**Design
Council**

issues facing the design industry

- design industry generates £11 billion to the UK economy
- UK seen as a global leader in design industry
- BUT what's on the horizon?
- China !
- Design Council - Government agency promoting benefits of design



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GOOD DESIGN PRACTICE

design council

higher skills for higher value

3 recommendations

- develop a 'design mark' for outstanding design delivery
- create regional centres of excellence
- provide database of designers willing to work with schools



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DESIGN
MARK
AWARDED FOR
GOOD
DESIGN
PRACTICE

The Design Mark aims to **identify and reward** primary and secondary **schools** that are **delivering high quality design education** to their students.

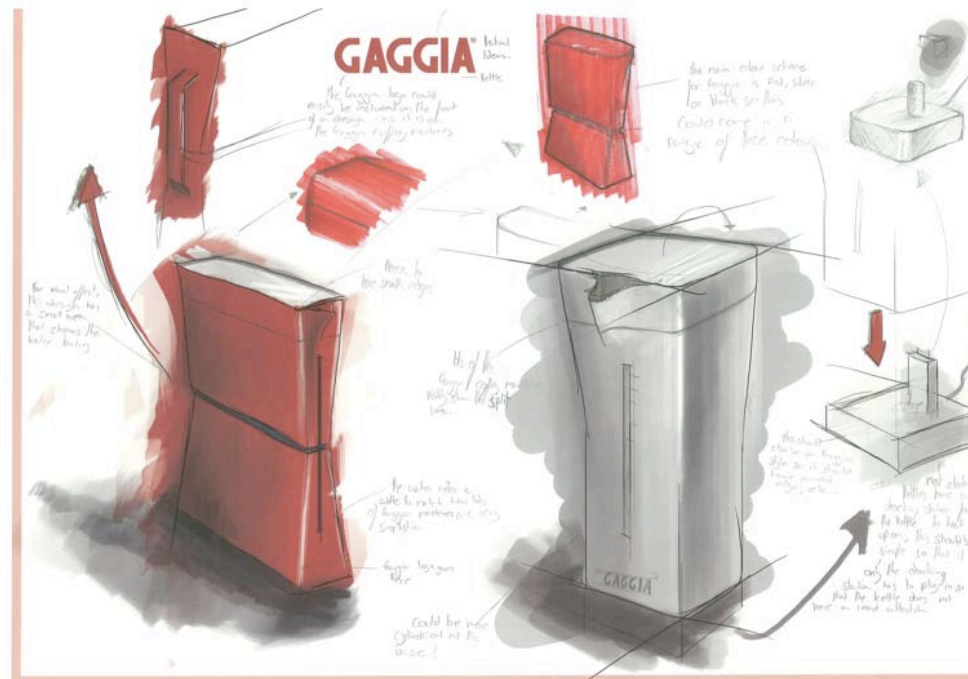


GOOD DESIGN PRACTICE

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National context - 'new' curriculum



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national curriculum vision statement

In design and technology pupils **combine practical and technological skills with creative thinking to design and make products and systems that meet human needs.** They learn to use current technologies and consider the impact of future technological developments. They **learn to think creatively** and intervene to improve the quality of life, **solving problems as individuals and members of a team.**

Working in stimulating contexts that provide a range of opportunities and draw on the local ethos, community and wider world, pupils identify needs and opportunities. **They respond with ideas, products and systems, challenging expectations where appropriate.** They combine practical and intellectual skills with an understanding of aesthetic, technical, cultural, health, social, emotional, economic, industrial and environmental issues. As they do so, they **evaluate present and past design** and technology, and its uses and effects. **Through design and technology pupils develop confidence in using practical skills and become discriminating users of products.** They apply their creative thinking and learn to innovate

Design and Technology – The National Curriculum for England, DCSF/QCA

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KS3 design and technology

Curriculum for Key Stage 3

The importance of design and technology

- Key concepts
- Key processes
- Range and content
- Curriculum opportunities



QCDA intentions of the re-write

- Aimed to provide greater flexibility for teachers
- Less content
- common format across subject areas
- Whole school approach to teaching and learning
- Systems and control and RMT (plus one from food and textiles)
- Whole department planning requirement
- Assessment key to the planning process



problems with implementation

- Takes time and discussion to get your head around the whole document
- Might require different curriculum models – not necessarily traditional rotation system
- Requires a very different approach to planning your curriculum



assessment

- Assessing Pupil Progress
- new Government has prevented national distribution

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National context - Specialist status



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specialist dimension

- Technology and Engineering Colleges
(approx 700 secondary schools in England, 25%)
 - greater ethos towards 'design' and 'technology'
 - commitment to sharing practice with partner schools (4 feeder, 1 secondary)
 - impacting on whole school improvement
-



National context - Youth technologies



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‘youth technologies’

- social networking
- text messaging
- skype
- email



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'youth' technologies



early learning through 'new technologies'

high skill levels in 'youth' technologies





‘youth’ technologies



innovate not replicate

new learning pedagogy!
young people learning on games see
learning as a different mindset.



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SO.....

- standing still is not an option
- challenge your students and staff
- be creative in exploring the potential
- If teachers are not involved in innovative activity, they are not likely to understand how to create the conditions in which students learn how to be innovative...

David Hargreaves, Chief Executive of the Qualifications and Curriculum Authority, defining 'innovation' at a CreativeNet conference, 22 November 2000



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the need for more UK STEM graduates

- Nearly a **third of companies do not believe they will be able to recruit sufficient qualified staff** this year and are even less confident looking four years into the future.
- There is an **emerging expectations gap** between the level of skills employers expect to see in new recruits and the skills output of the education system.
- There is a **need to improve the image and profile of engineering** and to improve education and in-school activities.

IET skills demand report 2008

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what are schools doing?

- **STEM is the new Literacy!**



- Science, Technology, Engineering and Maths Colleges have undoubtedly made strides to improve young peoples perceptions of STEM subjects
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altering perceptions of engineering



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WELCOME TO IET FARADAY

An exciting year-long programme of resources, activities, competitions and events designed to inspire young people about science, technology, engineering and maths (STEM).

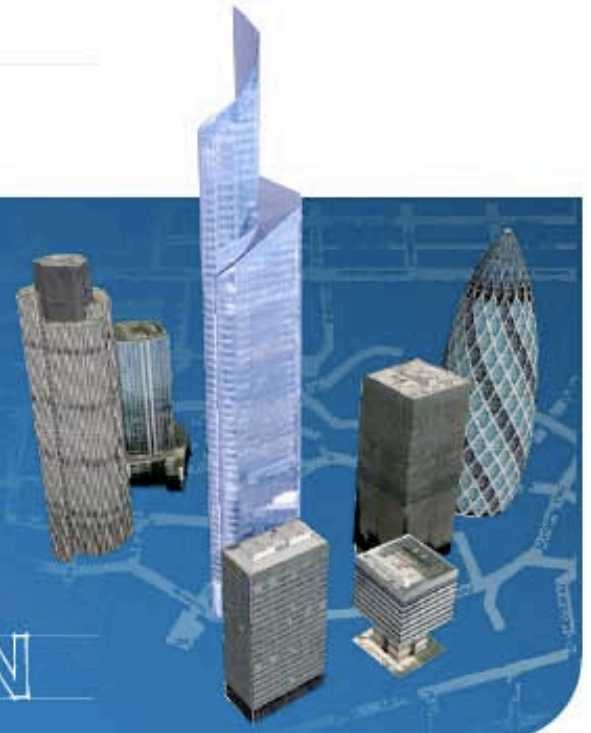
With a new theme every year, the website contains a wealth of resources, including teaching materials for KS3, KS4 and Engineering Diploma, specially made films and games, which bring the real world of engineering to life.

[More about us...](#)

This year's theme looks at some of the most innovative structures we live amongst today, as well as what we might have in the future.

Explore:

URBAN EVOLUTION



CHALLENGE DAYS

Thank you to all schools that submitted a Challenge Day host school application. We received more than expected! Have a look at

TEACHERS RESOURCES



All the support material you need to use the IET Faraday themes in your own teaching environment.

[Get the materials](#)

MORE THEMES





what's the future

- lots of initiatives in education
- D&T teachers need to be at the front of these initiatives
- D&T teaching must be dynamic and vibrant
- WE need to take control, making a case for our subject being at the heart of the curriculum

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thank you / terima kasih

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workshop sessions

- utilising 'youth' technologies
 - how creative is your design process?
 - STEM teaching and learning activities
 - the Design Mark; is it for you?
 - assessment issues in design and technology
 - creative design strategies
 - making a case for design and technology
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