

The JCB Academy

'Developing Engineers and Business Leaders For the Future'

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Developing the Technical Curriculum

Vision:

Developing Engineers and Business Leaders For The Future

Mission:

- Develop employable young people with:
 - Positive attitudes
 - Emotional intelligence
 - Intellectual horsepower
 - Appropriate competencies
- Achieve excellence in academic and vocational education
 - A catalyst to improve provision across the region for engineering, manufacturing and business skills

Developing the Technical Curriculum

- Key Principles (January 2009):
 - Achievement of key aspects of the mission
 - Based around the Engineering and Business Diplomas
 - Industry involvement
 - Delivery by teachers and skilled engineers
 - Holistic experience for young people

Initial development – January 2009 – March 2009

- Five term year – 8 week blocks of work
- Trialling the concept – mapping out an 8 week unit of work based around an industry challenge.
- Engaging with partner organisations.
- Forming a mechanism to enable the concept to be achieved
- Getting the awarding body on board
- Ensuring the specialist support was available
- Devising the conference programmes to achieve the necessary outcomes

Making it concrete

Stage 1 – Conference (October 2009 – Feb 2010)

- Produced an outline for the challenge
- Enabled us to achieve tie in from the business organisations – it was their project.
- Identified the place of the core subjects within the challenge

Making it concrete

Stage 2 – Developing the outline (October 2009 – Feb 2010)

- Turning the conference material into a word document covering the eight week period
- Creating the learning platform outline
- Confirming the core subject element with the specialists

Making it concrete

Stage 3 – Developing a complete curriculum (March 2010 – August 2010)

- Writing the controlled assignments alongside OCR
- Developing the core curriculum
- Producing the material to support the implementation of the diploma activities
- Mapping the PLTS
- Integrating the remainder of the entitlement curriculum

What does it look like?

14-16 - Toyota Challenge – 8 week block of work delivering:

Manufacturing Unit - Higher Engineering Diploma

Teamwork Unit – Higher Business Diploma



What does it look like?

16-18 – Bosh Challenge – 8 week block of work delivering:

Maintenance Unit – Advanced Engineering Diploma



Partners



Rolls-Royce



BOMBARDIER



What was/is difficult?

- Keeping the momentum from the conferences – Toyota challenge designed in January 2010 and delivered in January 2012.
- 66% of engineering is delivered by non-qualified teachers.
- Over planned the integration of the core subjects.
- Two Diplomas – Engineering and Business at KS4
- Ensuring students had enough practical along with the written and theoretical work.
- Evolving the projects as we have developed.
- Funding

What has worked for us?

- Involving the Challenge Partners in real curriculum design.
- Making the curriculum real to students.
- The students like being taught by people who have *'done it'*.
- Students like the mix of activities
- The relevance of the core curriculum – English, Mathematics and Science.
- Evolving the projects as they have developed.

Key Messages

- Technical Education inspires students and makes a difference to outcomes for young people.
- Projects which have real involvement from industry are hard work but provide the USP.