

Teachers' Notes - Engineering the *Warrior*

The Project and the National Curriculum

History

Elements of the 'Engineering the Warrior' section might be used for Unit 11 of the QCA Scheme of Work at Key Stage 3, Industrial Changes: Action and Reaction.

This unit is broken down into four sections:

1. What changes happened in the locality around the school?
2. Local industry: What happened?
3. Did everyone agree with the industrial changes?
4. How industrialized was Britain by 1850?

Full details of the Key Stage 3 scheme of work for History can be found on the DFES website:

http://www.standards.dfes.gov.uk/schemes2/secondary_history/teaching

The activities associated with the project give opportunities to help meet some of the unit's requirements. *Forces, Blocks and Tackles* could be used in Sections 1 and 2 as it covers the development of Marc Brunel's Blockmills. The remaining downloads *Materials, Armament, Propulsion* and *Navigation* can be used to give pupils a flavour of the kind of technology available at the time.

Science

The activities included in the *Engineering the Warrior* section of this site have some excellent applications for the teaching of forces and magnetism at Key Stage 3. A breakdown of what might be possible is given below with reference to the Key Stage 3 QCA Scheme of Work for Science:

Forces, Blocks and Tackles

Build a very simple block and tackle and investigate the forces involved.
Could be used to support unit 7K - *Forces and their Effects*

Materials

Build a simple materials tester and test things to destruction with it.
Could be used to support unit 7K - *Forces and their Effects*



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Science (continued)

Armament

Build a simple 'alka-seltzer' cannon.

Could be used to support units 7K - *Forces and their Effects*, 7F - *Simple Chemical Reactions*, 7G - *Particle Model of Solids, Liquids and Gases* and 9L - *Pressure and Moments*

Propulsion

Build a land yacht and investigate how sails work.

Could be used to support units 7K - *Forces and their Effects* and 9K - *Speeding Up*

Navigation

Build a 'dry card compass'.

Could be used to support unit 8J - *Magnets and Electromagnets*

Full details of the Key Stage 3 Scheme of Work for Science can be found on the DFES website:

[Http://www.standards.dfes.gov.uk/schemes2/secondary_science/](http://www.standards.dfes.gov.uk/schemes2/secondary_science/)

Design and Technology

The following activities in the *Engineering the Warrior* section could be used to support the particular units of the Key Stage 3 QCA Scheme of Work for Design and Technology

Forces, Blocks and Tackles

Build a very simple block and tackle and investigate the forces involved.

The information section could be used as good background information on the beginnings of mass production as it covers the development of Marc Brunel's Blockmills in Portsmouth dockyard. This could be used to support unit 08 eii - *Producing Batches Focus - Resistant Materials*

Materials

Build a simple materials tester and test things to destruction with it.

Could be used to support unit 07 aii - *Understanding Materials Focus - Resistant Materials*

