



# IOP and Lab in a Lorry

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## Lab in a Lorry

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- What is it ?
- Why do we do it ?
- How does it work?

## Millom School – Cumbria, England



## What is it ?

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- A hands-on, working lab – not a show or demonstration
- Staffed by practising physicists and engineers



## ..what is it?

- Young people do experimental physics in the way it actually happens – informed by curiosity and intuition
- Target audience: 11-14 year olds



*Dr Dayna Mason –  
Lab Coordinator*

## Why do we need it?

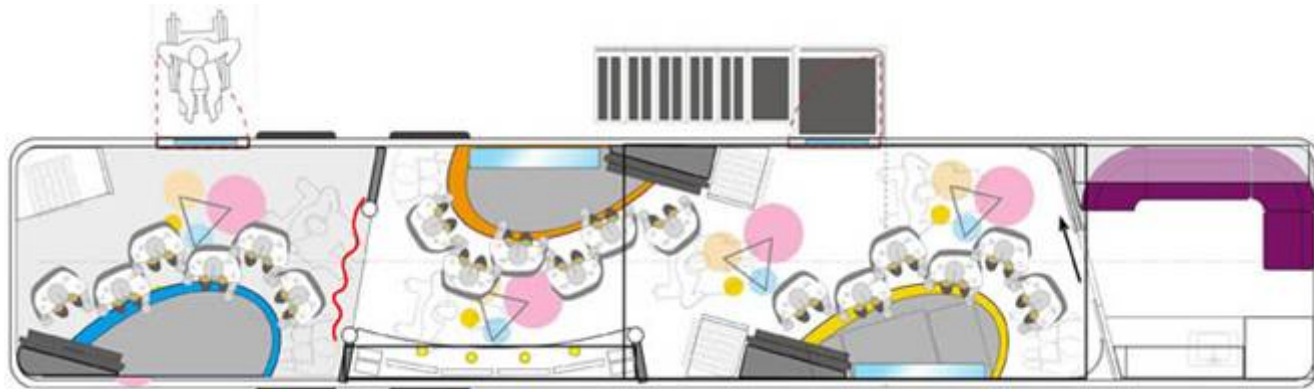
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- Cultivate the next generation of physicists and engineers and to ensure future supply
- Current Obstacles
  - Poor provision of experimental science in some schools
  - Poor image of physicists and engineers - as people and role models

hear it! see it! feel it!

## Layout of Lorry

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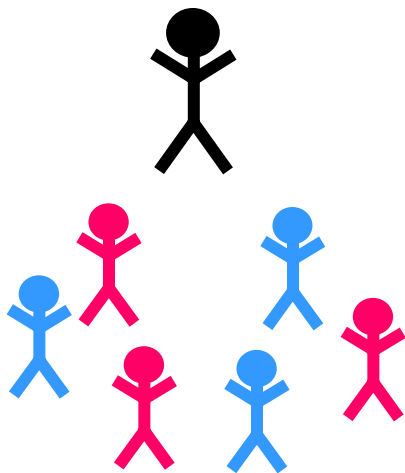


## A standard visit

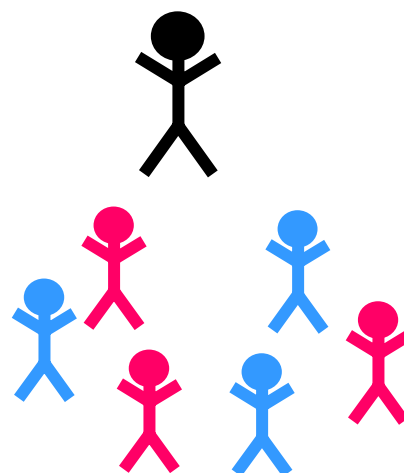
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- Staff: 3 volunteers and 1 co-ordinator
- Visitors: 18 maximum

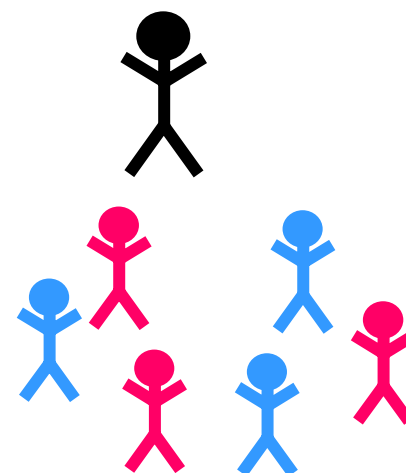
Experiment 1



Experiment 2



Experiment 3



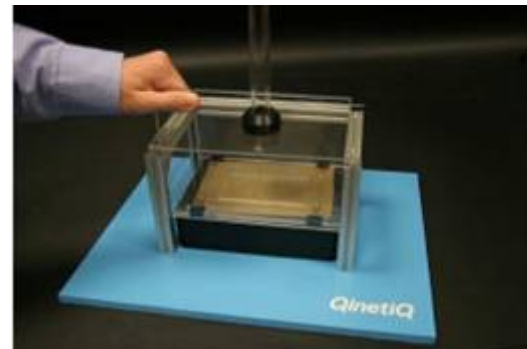
Co-ord





## Experiments

- Resonance
- Oil well
- Scattering
- QinetiQ impact testing
- Climate Change – wind turbines



## Funding

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- Institute of Physics covers costs of programme management and some staff costs.
- Operating costs met by sponsors
  - Lab 1, Scotland – business and Scottish government.
  - Lab 2, East Midlands – Regional Development Agency.
  - Lab 3, South West – applying to charitable trusts for funding.

## Statistics

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- Over 116,000 children have visited the three Labs since May 2005.
- Over 1200 volunteers have been involved
- Over 70% of pupils agreed that Lab in a Lorry was an enjoyable experience.\*

## After a visit..

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- 44% of students said they wanted to find out more about science.\*
- 37% wanted to study more science in the future
- 14% agreed that it had made them want to become scientists in the future.\*

## Longer Term Impact

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- Extremely positive impact on students and teachers in the short term.\*
- Longer term impact is unclear, but students have detailed memories of activities two years after a visit.\*

*\*Evaluation of Lab in a Lorry, Martin Hollins August 2009*

## ...long term impact

- Students value different environment, volunteers that are scientists, teamwork and hands-on activities.\*
- “Lab in a Lorry visited Carnoustie High School last year and this year our numbers for physics have significantly increased from 38 to 54...a number of pupils have said that Lab in a Lorry was part of the reason for their subject choice.” – Teacher, Carnoustie High School.

## Evaluation – recommendations for the future

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- A teachers' version of the visit for professional development.\*
- Training of non-specialist physics teachers.\*
- Resource pack to leave behind after the visit.\*

## Pennines – Rural England

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## Western Isles of Scotland



## Moat Community School – Leicester, England

