

## Raising science attitudes and perceptions at Key Stage 3

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# Raising science attitudes and perceptions at Key Stage 3

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## Context-based learning<sup>(1)</sup>

Real-world applications of the science curriculum.

Non-science applications of science.

Delivery by experts from different areas of science indirectly communicates diverse careers.

## Practical focus<sup>(2,3)</sup>

Hands-on and visual conceptualisation of complex concepts.

Wet chemistry workshops improve practical skills and confidence.

Team work, problem solving and presentation skills nurtured early on.



## Repeat engagement

Enables project-based learning<sup>(4)</sup>.

Builds familiarity with facilitator for more rounded engagement.

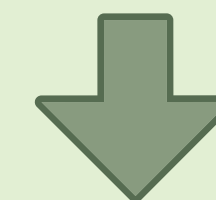
## Local emphasis

Bilingual delivery.

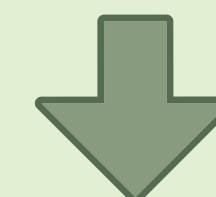
Empowerment and relatability.



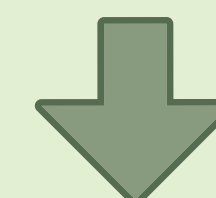
**Background**  
Low science uptake  
post-GCSE



**Project aims**  
To increase uptake  
through enhancing  
attitudes and perceptions  
towards science



**Strategy**  
Deliver practical and  
applied chemistry  
workshops over a  
3 year period



**Data collection**  
Longitudinal study design  
using questionnaires and  
focus group interviews

*"I don't really know what a  
science job is"*

*"It's, like, out of fashion"*

## Next Steps...

Explore and further  
validate questionnaire data  
using Exploratory Factor  
Analysis and Confirmatory  
Factor Analysis<sup>(5)</sup>:

Parallel analysis of PCA  
determines the number of  
factors present.

Factor loadings explain  
interrelationships between  
latent and observed variables.

CFA applied to test set (30%  
of data) allows confirmation  
of the model.

Factor score coefficients  
allow item weighting when  
generating overall latent  
variable 'scores'<sup>(6)</sup>.

**Build an understanding of the  
relationships between science  
capital, attitudes, perceptions  
and demographics.**

## References

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