

# Citizen Science Challenge

Check your weather forecasts!



Home Observations Forecast Verification Resources

## Welcome to mathMETics

### Introduction

Welcome to mathMETics, the project which demonstrates the role of mathematics in weather observation and forecasting in a variety of enjoyable and informative ways. The lesson plans and activities are designed to be delivered in mathematics lessons during National Science and Engineering Week 2014 to students in years 9 and 12. There are a number of options available to tailor the activities to your requirements:

**Option 1: Years 9 and 12 working together – Including Observations:** This is the recommended option, requiring observation equipment and collaboration between years 9 and 12.

**Option 2a: Year 9 working independently – Including Observations:** This option will work as a stand-alone for year 9 students, requiring observation equipment.

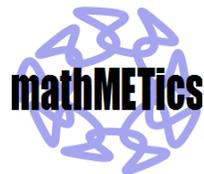
**Option 2b: Year 12 working independently – Including/Without Observations:** This option will work as a stand-alone for year 12 students, with or without observation equipment.

The required observation equipment will be a thermometer, compass and calculator. An anemometer for measuring wind speed is recommended but not essential. Full information on each option is available in the **Information Pack**.



Use the mathMETics website developed by researchers in CliMathNet to:

- Collect weather data at your school or home
- Compare your findings with the weather predicted for your area
- Upload your data to the Met Office
- Check forecast accuracy
- Understand some of the ways mathematics and statistics are used in weather and climate modelling
- See the results of your contributions on the website



[www.mathMETics.org/](http://www.mathMETics.org/)

## About us

This network brings together researchers who work on climate science with mathematicians and statisticians so that they can collaborate on tackling nationally and internationally important climate change questions.

The CliMathNet project is managed by Dr Emily Paremain and led by Prof Peter Ashwin at the University of Exeter and Prof Chris Budd at the University of Bath. They are assisted by Prof Peter Cox, Prof Peter Challenor and Dr Sebastian Wiecezorek.

CliMathNet is funded by a UK research funding organisation, the Engineering and Physical Sciences Research Council (EPSRC), as part of a wider collaborative programme Living With Environmental Change (LWEC).

**EPSRC**

Pioneering research and skills



CliMathNet is associated with "Maths for Planet Earth".



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**A network for people interested in Weather, Climate Science, Mathematics and Statistics**



**Do you want to know more about Climate Change?**

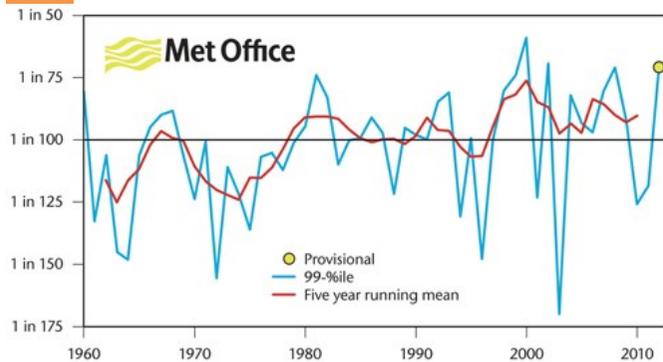
**Did you realise that the maths and stats that you learn at school is used to help predict the weather and climate?**

[www.climathnet.org](http://www.climathnet.org)

## Are you following the climate change debate?

Met Office figures for December 2013 to February 2014 show that the UK had its wettest winter since records began in 1910.

Met Office analysis indicates that 'extreme' days of rainfall may have become more frequent over time.



Graph: Contains public sector information licensed under the Open Government Licence v1.0

***By using your maths, you can understand and contribute to the climate change debate***



## Maths is the way that we understand both the weather and climate change

### Helping to make decisions:

such as to raise the **Thames Barrier** to prevent London from flooding



image: James Campbell



Or, applying **fertilizer** to land at the right time to reduce the risk of it being washed into rivers

Or, to **plan for climate extremes**



## How to get involved

- for students and teachers:



See our resources online:

- "Climate Change - does it add up?", a downloadable presentation by Prof Chris Budd
- MathMETics Citizen science challenge to **check your weather forecasts** [www.mathmetics.org/](http://www.mathmetics.org/)
- Links to other useful resources about maths, weather and climate

[www.climathnet.org/forschoolsandpublic/](http://www.climathnet.org/forschoolsandpublic/)  
[www.mathmetics.org/](http://www.mathmetics.org/)