

# THE CREATIVE SCIENCE CENTRE

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newsletter

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## IN THIS ISSUE

- Latest News
- CSC YouTube Channel
- Scientific equipment I can build for you
- See what people are saying about my work

## MATRIX-TENSOR GAME YOUTUBE VIDEO

YouTube GB

Search



tensor game demo



Jonathan Hare  
191 subscribers

Analytics

Edit video

7

Share

54 views 2 weeks ago

An array of 512 bright white light leds is used to teach about scalars, vectors, matrices and tensors. There are two modes for i) games and ii) demonstrations. So far, i) 'find the dimensions of the tensor' and iii) 'crack the matrix' games. There are also a number of demonstrations that help teach about this mathematics. S

\* talks and workshops  
\* articles \* projects \* resources  
[www.zoomscience.co.uk](http://www.zoomscience.co.uk)  
[www.creative-science.org.uk](http://www.creative-science.org.uk)



## Online workshops with BBC TV presenter and scientist Dr Jonathan Hare

This web site contains details of Jonathan's online science activities for children and adults including mentoring, one-to-one and group workshops.

Click on the links at the top of the page for details.

Dr Jonathan Hare is a British physicist, science communicator and television presenter. Jonathan was on all BBC TV Rough Science and Hollywood Science series. Since 1990's he has run the Creative Science Centre originating 100's of talks and workshops for all ages locally and around the world.

Details of my on-line workshop can be found at: [www.zoomscience.co.uk](http://www.zoomscience.co.uk)

### New videos on my YouTube Channel

The last year I have been working with Prof. Hazel Cox's group at Sussex University, designing and building a game with 512 leds to teach scalar, vector, matrix and tensor maths. Search on YouTube for 'Dr Jonathan Hare' and you will find my video channel - watch the videos!

**Please contact me about Year Group talks & workshops I can present at your school or institution. These include amongst others:**

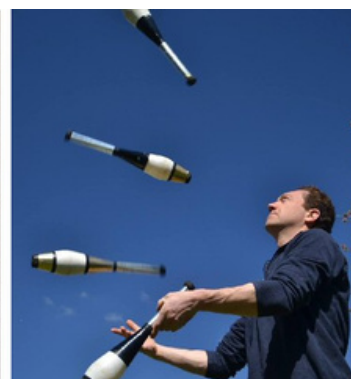
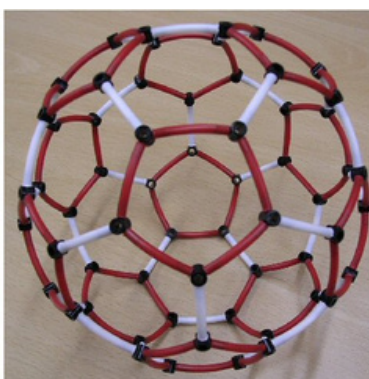
The discovery of C60 Buckminsterfullerene

Voice on a lightbeam

Hollywood Science

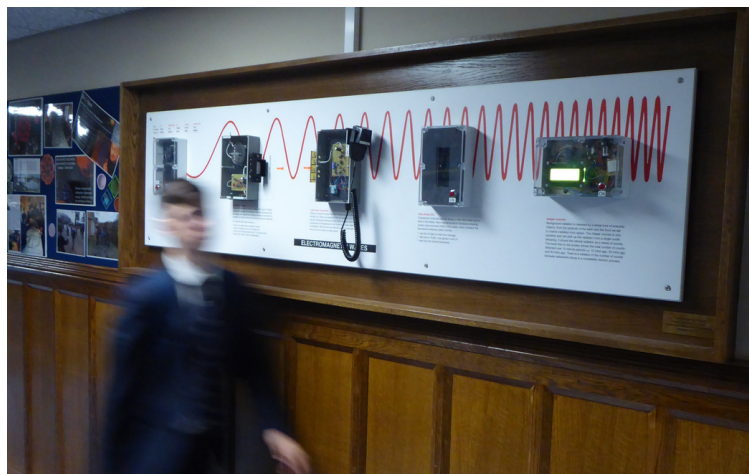
Some Science of Breaking Bad

**Visit [www.zoomscience.co.uk](http://www.zoomscience.co.uk) for my on-line talks & workshops and [www.creative-science.org.uk](http://www.creative-science.org.uk) for everything else.**



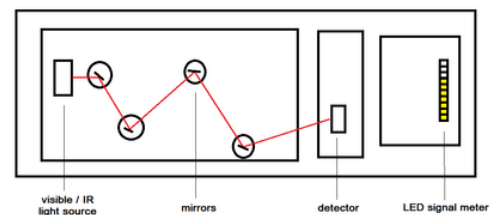


I can build scientific equipment for your laboratory, classroom, or exhibition space. See examples below:



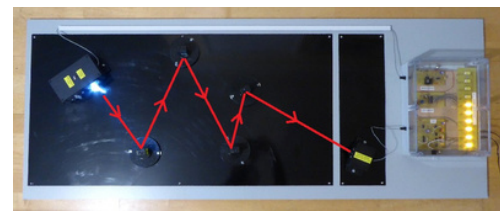
### **The Electromagnetic Spectrum (Whitgift School)**

A permanent interactive display: including a radio transmitter and receiver, UV fluorescence, IR heat camera, light beam communications and logging Geiger Counter experiments.



### **Light beam demonstration (Whitgift School lab)**

Students must skilfully direct a light beam by reflecting and refracting the beam, via a set of moveable mirrors and light pipes, to get the best possible signal from the LED phase sensitive detector. It has easy (visible light) and hard (Infrared light) settings!



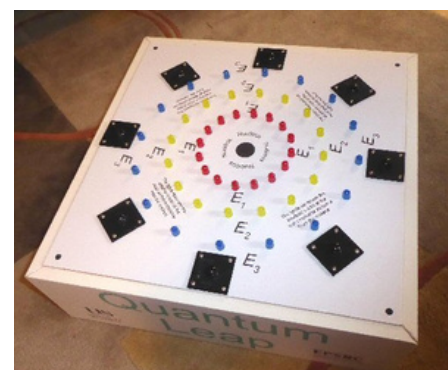
### **Windmills & Turbines**

A set of windmills which participants can use to power various electronic devices (calculators, LED torches, radios etc.). The number of blades and the 'angle of attack to the wind' can be adjusted to understand how to maximise harnessing wind power.



### **Quantum Mechanics game**

With Prof H Cox's group at Sussex University we have developed a 'Quantum Leap' game. Up to 8 students can control the game - only when they hit the correct frequency of button pushing will the LEDs jump to the next 'quantum level' (email me for workshop details).



## Here's what people say about my work .....

"Absolutely fantastic! Our kids were buzzing all the way back to Newbiggin. As I mentioned it's more than just Science, it's about role models and aspirations and this visit provided all three and more."

[Rob, Newbiggin Middle School, Science Christmas Lectures, Durham](#)

"I had to write to express my appreciation of your commitment to bring Nobel Prize winning science to children's education ... my little son Tommy, 5 years old, came home thrilled and truly inspired by the workshop."

[Vanessa, NAGC children](#)

"I always try to tell them Chemistry is fun and you managed to convince quite a few - so thank you. Your enthusiasm is great and you work well with the [A-level] students - so please continue your great work promoting science."

[Cheryl, Esher College & FSU](#)

"Jonathan is one of the most passionate, enthusiastic and resourceful science teachers our children have had." [Iryna, London](#)

"Thank you very much for your outstanding contribution to last week's Science in Action programme for GCSE students. ... I hope you could see for yourself that you had an attentive and appreciative audience - quite an achievement when you consider that there were eight hundred 14-16 year olds ... "

[Radka, Training Partnership, Institute for Education](#)

"Jonathan's workshops are enlightening, thought-provoking, inspiring and a most memorable highlight of each semester!" [Cheryl, High School Teacher](#)

"It has been an ENORMOUS pleasure to accompany you around Sussex [a month of Brighton Science Festival workshops], many inspiring ideas and deep truths have emerged, so naturally as a result I'm more dazed and bedazzled by the world than I ever was. So it goes. I hope you enjoyed it. I know that 1000 kids did"

[Richard Robinson, Brighton Science Festival](#)

"Thank you very much for the Chemistry in the movies lecture [Hollywood Science and Some Science of Breaking Bad talks]. I know it went down well because I tried to stop a discussion on the amount of viable oxygen in a car tyre for a good 10 minutes before moving on to inter-molecular bonding! Anyway truly appreciated, thanks!"

[John Luton, Varndean College](#)

