



# THE SCIENCE BEHIND THE MAGIC

KS4

# "ANY SUFFICIENTLY ADVANCED TECHNOLOGY IS INDISTINGUISHABLE FROM MAGIC" - ARTHUR C CLARK

- What does this quote mean?
- How would someone in ancient Greece times have reacted to modern medicine and vaccinations?
- Consider the following video:  
<https://www.youtube.com/watch?v=Ux7LSzwPUxE>
- Explain whether you think the theory is credible. How are the points put forward explained by other theories?
- A film detailing more of the theory is here:  
[https://www.youtube.com/watch?v=RaP7pq\\_ilGE](https://www.youtube.com/watch?v=RaP7pq_ilGE)

# MAGIC CHEMICAL REACTIONS

- <https://www.youtube.com/watch?v=YFAG9pWjngU>
- Watch the above clip and watch the magic happen.
- How is the solution changing from black to white and then back to black?



# CAN YOU EXPLAIN IT?

- The type of reaction you have just watched is one of many oscillating reactions.
- What is an oscillating reaction and what allows the colour to keep changing?
- Do some research into oscillating reactions, can you find other oscillating reactions that make different colour changes?
- Explain what is producing the colours?
- Explain in terms of chemical reactions how an oscillating reactions works.



# THE COMPETITION!

Prize available for 1st place!

Honourable mentions for 2nd and 3rd place



# THE COMPETITION

- In magic things often appear to happen of their own accord with no explanation, this is the beauty and the mystery of magic.
- Using your research and explanation of oscillating reactions, use this science to come up with a way to use these in a magic light extravaganza that appears to happen of its own accord.
- Within this needs an explanation as to the aim of your magic trick with a step by step guide to carry it out as well as an explanation on how it will work, the science behind the magic!

# COMPETITION ENTRIES

- Email: [Competitions@gordons.school](mailto:Competitions@gordons.school)
- When you email, please use the subject heading 'KS4Week 4 – The Science behind the magic'
- Closing date: 25th May 2019
- Winners will be announced via weekly Schoolcomms