

**David Featonby** “retired” from school physics teaching after 35 years in the classroom, working successfully with pupils of all abilities in a large comprehensive school in Newcastle on Tyne , England. Since retiring he has worked with the Institute of Physics UK as a Teacher Trainer in the North East of England and throughout the UK. He has represented UK at Science on Stage in Geneva 2005, Grenoble 2007, Berlin 2008, Copenhagen in 2011 and Slubice in 2013. David now works with the International Science on Stage (Europe) Committee as UK representative and member of the Executive Board. He is author of articles in the European journal Science in School and several "hands on" articles in the international journal Physics Education, including a regular column entitled “What happens Next?” He has led workshops at many conferences throughout the UK and Europe. David is particularly interested in making Physics accessible to all and showing the physics in everyday things to the public, whatever their age. Most recently he was given a special commendation from the Institute of Physics for his recent article on the Tippee Top, and has been instrumental in raising awareness of the problems children with Colour vision deficiency experience in science. David is a member of the latest Science on Sate i-stage group producing on line materials for teachers on “Science and Football”. David is a keen musician (playing violin, and Northumbrian small pipes )and recently led an international choir at Science on Stage in London. Apart from his science David spends time at home in a community orchestra, is a governor of his local school, a keen member of his village church and a grandfather!



## Science on Stage...“From teachers, for teachers”

- ...is a teacher network established in 2000
- ...is a non-profit association since 2011 with headquarters in Berlin
- ...has National Steering Committees (NSCs) in 25 countries
- ...reaches about 100.000 teachers and teacher trainers, e.g. via the NSCs
- ...has organised nine European festivals from 2000-2015

Science on stage has a main aim of providing encouragement and inspiration for science teachers throughout Europe, by bringing together teachers to share experiences and ideas.

We achieve this through our biannual conferences which take place at different venues throughout Europe, linking teachers of different nationalities, through international exchange visits, working together on projects, shared articles in journals, and our own website both European and national, together with follow up work in our own countries.

The address will look at the ways in which Science on Stage has developed over the years and some of the key aspects which are central to its success. I will include examples of the ways in which we seek to work together and give some details of the next festival to be held in Debrecen, Hungary in the summer of 2017

### David Featonby

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Science on Stage UK, National Science Committee  
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### Colour blindness and science

– 50 shades of muddy green interspersed with blues and yellows

Colour blindness or colour vision deficiency (CVD) is the most common genetic disorder in humans affecting 250 million worldwide. About 8% of males have colour vision deficiency, i.e 1 in 12 boys in schools. Despite its prevalence many teachers do not realise that it is more than ‘getting colours mixed up’; it is a problem with distinguishing colours across the spectrum. This can impact on the engagement, understanding, and attainment of a pupil. Teachers are aware of this disorder, but rarely have any training in dealing with the issues, rarely know who is colour blind in a class, and therefore rarely make any adjustments to lessons. There is little consistency across Europe in either assessment of CVD or strategies to deal with it, particularly in schools. Children and parents are often unaware that they are colour blind, and many teachers do not have a clear understanding of the special needs of colour blind children. Hence pupils can be severely disadvantaged and incorrectly diagnosed as being inattentive, underperforming, or requiring other types of special education needs support. There is very little information readily available as to how best to deal with this issue.

The seminar will

- Briefly describe the different types of CVD and their prevalence
  - Give examples of science curricula where this is an issue, how CVD affects pupils attainment and self esteem, and give assessment examples which should trigger a teacher’s alertness to a pupil with CVD
  - Give examples of strategies that can be used at primary (junior) level and secondary level.
  - Outline some of the latest technological developments which can aid teachers understanding of CVD and pupils attainment
  - Introduce the possibility of a group working to share best practice.
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