

1. Record Nr.	UNINA9910463390203321
Titolo	Performing science : teaching chemistry, physics and biology through drama // edited by Ian Abrahams and Martin Braund ; contributor, Ian Abrahams [and eight others]
Pubbl/distr/stampa	London, [England] ; ; New York, New York : , : Continuum, , 2012 ©2012
ISBN	1-4411-8452-X
Descrizione fisica	1 online resource (161 p.)
Disciplina	507.1241
Soggetti	Science - Study and teaching (Secondary) - Activity programs - Great Britain Drama in education - Great Britain Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Acknowledgements; Introduction; The purpose of this book ; Background; Structure; 1 The value of using drama to teach science; General introduction to using drama in science teaching; Focusing games ; Tableaux/Freeze frame; Animated diagrams; Role play; General tips; 2 Biology:session plans for 11-14; Adaptation and survival Martin Braund; Microbes - the fight against disease Martin Braund; Human reproduction - fertilization Martin Braund; Muscles and movement - features (adaptations) of animals without backbones Martin Braund; Human digestive system Martin Braund Circulatory and respiratory systems Sandra Campbell Insect pollination Sandra Campbell; 3 Biology: session plans for 14-16; Food chains - energy transfer Martin Braund; Kidney transplants - homeostasis Martin Braund; Evolution Martin Braund; Protein synthesis Sandra Campbell; Germ theory Sandra Campbell; Photosynthesis and the carbon cycle Sandra Campbell; Cells Sandra Campbell; Reed warblers and cuckoos Sandra Campbell; 4 Chemistry: session plans for 11-14; Particle arrangements in solids, liquids and gases - going further Ruth Amos Physical processes - soluble or insoluble/making a solution Ruth Amos

Evaporation and condensation Ruth Amos ; Physical and chemical processes - burning a candle Ruth Amos ; The rock cycle Chris Otter ; Distillation Chris Otter ; pH scale Chris Otter ; Elements, mixtures and compounds Chris Otter ; 5 Chemistry: session plans for 14-16; Balancing equations - the Haber process Ruth Amos; Environmental chemistry - carbon dioxide in the dock Ruth Amos ; Sustainable development - the World Games 2040 Ruth Amos ; Electrolysis Chris Otter

Acid/alkali neutralization Chris Otter Addition polymerization Chris Otter ; Exothermic and endothermic reactions Chris Otter ; 6 Physics: session plans for 11-14; Electricity - conservation of charge Ian Abrahams ; Heat - conduction Ian Abrahams ; Reflection Ian Abrahams ; Drag Erdem Erem and Murat Sag lam; Electric circuits Erdem Erem and Murat Sag lam; Sound - its transmission through solids, liquids and gases Erdem Erem and Murat Sag lam; Magnetic fields Rachael Sharpe; The solar system Rachael Sharpe; 7 Physics: session plans for 14-16

Braking distance Ian Abrahams P-waves and S-waves Ian Abrahams ; Static electricity Ian Abrahams ; Radioactivity - half-life Ian Abrahams and Rachael Sharpe; Force and acceleration Murat Sag lam and Erdem Erem; Energy Murat Sa glam and Rachael Sharpe; Alpha, beta and gamma absorption Rachael Sharpe; 8 Conclusions; Two cultures or one way of learning?; How drama can help in the teaching and learning of science; Appendix 1: Warm-up exercises; Fruit salad; Hand circle ; Keepy uppy; Psst!; Touch three things; Two truths and one lie; Appendix 2: optional student activities  
Microbes - the fight against disease

---

## Sommario/riassunto

How to increase students' interest and engagement in science is a challenge shared by teachers around the world. Designing effective science lesson plans using drama and role play requires expertise across two very different subject areas and, as a consequence, many science teachers find it difficult to incorporate this technique into their teaching. This book provides busy teachers with ready-made lesson plans for teaching many abstract scientific principles in a fun and novel way that really engages students. Drawing on and combining the knowledge of biology, chemistry and physics educatio

---