

Index to Volume 91

This index is in three parts: Title, Subject and Author. (H) = Helpdesk; (L) = letter.

Index by title

- A challenge for students to design an experiment to measure force in circular motion (334) 87
- A mnemonic for the Periodic Table (334) 25
- A reaction between zinc and concentrated sulfuric acid to produce hydrogen sulfide (334) 20
- A serendipitous singing tube experiment (335) 34
- A simple demonstration for estimating the persistence of vision (334) 15
- Behind the public face of Kew: education and conservation in the Millennium Seed Bank (336) 43
- Biodiversity in school grounds: auditing, monitoring and managing an action plan (336) 89
- Biodiversity in word and meaning (336) 27
- Bioluminescence in the classroom: a novel approach to student learning (336) 55
- Brain biology and learning (337) 99
- Chemical bonding and electronegativity (336) 15
- Chemistry and the Diploma in Science (335) 57
- Chemistry education in schools and colleges – a personal perspective over the last decade (335) 55
- Chemistry for tomorrow's world (335) 81
- Choose words carefully (L) (336) 7
- Colours (334) 26
- Creating a chart of the nuclides (336) 18
- Darwin and evolution: a set of activities based on the evolution of mammals (337) 75
- Developing investigations in science (335) 32
- Discover Chemistry: an education partnership between Pfizer and the Royal Society of Chemistry (335) 71
- Diversity in biological molecules (336) 33
- Draw a scientist – not a good start (L) (334) 7
- Ecological observations on coral reefs (334) 10
- Effective practical science (337) 37
- Embedding of ICT in the learning and teaching of physics: what teachers say about the use of computers in physics lessons (336) 119
- Encouraging trainee teachers to write for a professional audience (337) 9
- Engaging pupils in decision-making about biodiversity conservation issues (336) 73
- Enquiry-based elementary school science supported by handheld computers (334) 101
- Enthusiasm, relevance and creativity: could these teaching qualities stop us alienating pupils from science? (337) 51
- Evaluating practical work using de Bono's 'Thinking Hats' (337) 16
- Explaining the distinction between accuracy and reliability in scientific measurement (335) 24
- Explaining the Young modulus (measure) of elasticity (334) 37
- Fuel for a fuel cell (335) 20
- Getting Practical – Improving Practical Work in Science (334) 58
- Getting Practical – Improving Practical Work in Science (335) 36
- Getting Practical – Improving Practical Work in Science (335) 48
- Happy zapping in the classroom: enhancing teaching and learning with electronic voting systems (336) 107
- Hard soap – soft soap (H) (337) 32
- How do we suck? (H) (337) 32
- How science could drive curriculum development (336) 113
- How zoos are meeting the challenges facing biodiversity: Bristol Zoo Gardens as a case study (336) 63
- Identifying and tackling common misconceptions in thermal conduction: a datalogging experiment (335) 28
- Increasing participation in science beyond GCSE: the impact of *Twenty First Century Science* (337) 67
- International Year of Astronomy 2009: Activities and observing mid-September to mid-December (334) 45
- International Year of Astronomy 2009: Activities and observing mid-December to mid-March (335) 36
- Involving the soap industry in science lessons (337) 21
- Language and concepts of thermodynamics (L) (334) 8
- Language and concepts of thermodynamics (L) (334) 8
- Less interested after lessons? Report on a small-scale research study into 12- to 13-year-old students' attitudes to earth science (337) 59
- Marking strategies: an approach to introducing secondary school pupils to assessment for learning (337) 12
- Misconceiving chemistry: the mismatch between chemical concepts and student thinking (335) 87
- New ways of teaching chemistry (335) 119

- On dragons and turkeys: physics for future citizens (337) 93
- Open sesame – the door to a cornucopia of delights (337) 24
- Outside chances (334) 29
- Powering up: an investigation of power output and change of heart rate during exercise (335) 9
- Practical Chemistry – an online source of demonstrations and experiments for chemistry teachers (335) 65
- Practical work in school science – why is it important? (335) 49
- Practical work: making it more effective (334) 59
- Protein structure: making the abstract more concrete (337) 19
- Putting shock and awe into The Bigger Bang! Staging high-end live chemistry events (335) 103
- Quantifying individual differences (334) 13
- Radio wave modulation schemes for mobile phones (H) (334) 43
- Research and evidence in science education (L) (337) 7
- Research and evidence in science education (L) (337) 7
- RNA interference: switching off genes after transcription – a silencing approach (335) 14
- Salty*: a chemistry research project into ionic liquids (337) 28
- Secondary science teaching in England: a view from the outside (334) 119
- Solid, liquid or gas, or something else? (H) (334) 40
- Some causes of error: 3 Faulty presentation and simplistic association (334) 93
- States of matter demonstrated in a fume cupboard (334) 23
- Teaching ‘How science works’ by making and sharing videos (337) 87
- Teaching and learning science for a better future (L) (335) 7
- Teaching and learning science for a better future (L) (336) 7
- Teaching biodiversity: a successful approach (336) 81
- Teaching secondary school science through drama (337) 109
- The Clubber’s Guide: Sustaining the enthusiasm (337) 33
- The Clubbers’ Guide: Science, technology, engineering and maths (STEM) clubs: Starting out (334) 51
- The Clubbers’ Guide: Science, technology, engineering and maths (STEM) clubs: Show me the money! Sourcing funding for a STEM club (335) 43
- The Galapagos Islands: Darwin and modern conservation stories (336) 99
- The infusion of biology into physics demonstrations (334) 77
- The perfect enzyme? Dopa oxidase (334) 16
- The plight of the honey bee (336) 49
- The Presidential Address 2010: The quest for excellence: making a link between Aristotle, Benjamin Franklin, Spike Milligan, little Sophie and Sam (337) 41
- The quantisation of nature (334) 30
- The simplest electric motor – ever? (334) 33
- The spider’s web of life (335) 17
- The tropical rainforest: a valuable natural history resource for students in Singapore (337) 115
- Theme editorial: Chemistry essentials and enhancements (335) 53
- Theme editorial: Two cheers for biodiversity (336) 23
- Triple science back on the agenda (334) 65
- Understanding kinetic energy and momentum (H) (334) 41
- Understanding kinetic energy and momentum (H) (334) 42
- Understanding kinetic energy and momentum (H) (334) 42
- Using and evaluating an inexpensive body composition monitor (336) 12
- Using biographies of outstanding women in computer engineering to dispel false impressions about engineers (334) 113
- Using ICT to extend access to practical work for students with disabilities studying 14–19 science (334) 107
- Using moss and liverwort growth-forms as environmental indicators (336) 9
- Views on evolution (337) 8
- Virtual learning environments: Best Choice can aid learning and reduce the marking load (335) 61
- Water transport across cell membranes: an update (334) 9
- What should be expected of successful engagement between schools, colleges and universities? (335) 97
- Why don’t zombies like hibiscus tea? A multi-subject approach to photosynthesis through the use of Grätzel cells (334) 71

Index by subject

- accuracy (335) 24
- activity videos (337) 87
- analogy (334) 93
- antibacterial washing (337) 21
- aquaporous (334) 9
- argumentation (334) 101
- assessment for learning (337) 12
- astronomy (334) 45; (335) 36
- athletic performance (335) 9
- athletics timing (334) 29
- atomic forces (334) 37
- attitudes to learning (337) 51, 59
- biodiversity (336) 9, 23
- biology education (336) 27
- bioluminescence (336) 55
- biophysics (334) 77
- body composition (336) 12
- body mechanics (334) 77

- brain (337) 99
 buoyancy (club activities) (334) 51
- centripetal force (334) 87
 chemical bonding (336) 15
 chemistry demonstrations (335) 103
 circular motion (334) 87
 classification (337) 75
 collision (334) 77
 colour vision (334) 26
 computer engineering (334) 113
 conservation (336) 63, 73
 coral reef (334) 10
 creative involvement (337) 109
 creativity (337) 51
 cross-curricular planning (336) 113
 curriculum change (337) 67
 curriculum time (334) 65
- dark skies (335) 36
 Darwin (335) 17; (336) 99
 datalogging (335) 28
 De Bono's thinking hats (337) 16
 decision making (336) 73
 Diploma in Science (335) 57
 disabled students (334) 107
 disease (336) 49
 drama in science (337) 109
 draw a scientist (334) 7
- Earth science (337) 59
 educational research (337) 7
 effective teaching (337) 59
 effectiveness (334) 59; (337) 37
 elasticity (334) 37
 electric motor (334) 33
 electronegativity (336) 15
 electronic learning and marking (335) 61
 electronic voting (336) 107
 enquiry (337) 28
 enzymes (334) 16
 evaluating (337) 16
 evaluating apparatus (336) 12
 evolution (335) 17; (337) 8, 75
 exciting demonstrations (335) 103
- food and fuels (335) 81
 fuel cells (335) 20
 fuels (335) 20
- Galapagos Islands (336) 99
- gene silencing (335) 14
 Getting Practical (334) 58, 59; (335) 36, 48, 49; (337) 37
 Grätzel cells (334) 71
- habitat (334) 10
 hand-held computers (334) 101
 heart rate and exercise (335) 9
 honey bees (336) 49
How science works (337) 16, 87
 hydrogen sulfide (334) 20
- ICT (334) 107
 ICT in physics (336) 119
 ignoring true facts (337) 7
 individuality (334) 13
 industrial partnership in education (335) 71
 industry link (337) 21
 inspiring enthusiasm (337) 24
 integrated studies (336) 113
 interactive IT (336) 107
 investigations (335) 32
 iron/sulfur reaction (335) 34
 isotopes (336) 18
- Kew Gardens (336) 43
 kinetic energy and momentum (334) 41, 42
- laboratory displays (337) 24
 language of measurement (336) 7
 L-dopa (334) 16
 learning (337) 99
 light (334) 26
 looking forward (335) 119
- marking strategies (337) 12
 measurement (335) 24
 membranes (334) 9
 misconceptions (334) 93; (335) 28, 87
 mnemonic (334) 25
 mobile phone communications (334) 43
 modelling proteins (337) 19
 modern zoos (336) 63
 molecular biology (336) 33
 Moon, planets and stars (334) 45
 moss (336) 9
- new lesson plans (337) 9
- no opposing camps (337) 8
 novel batteries (334) 71
 nuclides (336) 18
- observational evidence (337) 93
 Origin of life (335) 17
 osmosis (334) 9
 outdoor learning (337) 115
- particles (334) 23
 Periodic Table (334) 25
 persistence of vision (334) 15
 personality (334) 13
 photosynthesis (334) 71
 Planning ahead (337) 33
 post-16 science (337) 67
 practical planning (335) 49
 practical science (334) 59
 protection against disease (335) 14
 psychology (334) 13
- quantisation (334) 30
- rainforests (337) 115
 recruiting scientists and engineers (337) 41
 reduction (334) 20
 relevance (337) 51
 reliability of measurement (335) 24
 research methods (337) 28
 RNA interference (335) 14
 rotational motion (334) 15
- school grounds (336) 89
 science clubs funding (335) 43
 science in industry (337) 41
 science process skills (335) 32
 secondary science (334) 59
 seed bank (336) 43
 SI quantities (334) 30
 singing tube (335) 34
 solvents (337) 28
 speed of sound (334) 29
 starting a science club (334) 51
 states of matter (334) 23, 40
 student participation (337) 67
 student thinking (335) 87
 study of mammals (337) 75
 sulfuric acid (334) 20
- teacher education (337) 9
 Teachers' TV (337) 87

- teaching in England (334) 119
 teaching methods (334) 119; (335) 7; (336) 7, 81
 teaching overseas (334) 119
 ten years of chemistry (335) 55
 thermal conduction (335) 28
 thermodynamics (334) 8
 transition from school to HE (335) 97
 triple science (334) 65
- wallchart (336) 18
 websites – practical chemistry (335) 65
 Women in Science (334) 113
- Young modulus (334) 37
- Index by author**
- Abrahams, I (334) 59
 Anglin, S (335) 103
 Auty, G (334) 8, 42; (337) 32, 33
 Avraamidou, L (334) 101
- Baker, C H (336) 55
 Bektas, O (334) 119
 Bibi, K (337) 24
 bin Rajib, T (337) 115
 Bowdley, D (334) 45; (335) 36
 Brown, L (336) 81
 Brown, R J C (335) 24
 Burr, S (336) 99
 Byford, P (335) 7; (337) 7
 Byrne, J (336) 73
- Campbell, D (335) 103
 Campbell, P (336) 7
 Chee, C T (335) 28
 Chew, C (334) 77; (335) 28
 Chin, C (337) 115
 Colletti, L (337) 93
 Crossland, J (337) 99
- Darlington, H (334) 107; (337) 109
 Dillon, J (334) 65; (336) 7; (337) 37
- Eastwell, P (334) 7
 Eminah, J K (334) 20
 Evagorou, M (334) 101
- Fairbrother, R (334) 65
 Fairley, D (335) 34; (336) 15
- Ferreira, I (335) 20
 Fox, D N A (335) 71
 Freeland, P (334) 13; (335) 17; (336) 12
 Frost, M (337) 33
- Gadd, K (335) 57
 Garner, A (337) 16
 Garrett, S (336) 63
 Gilbert, L (336) 81
 Glackin, M (336) 7
 Goodwin, A (334) 33
 Grace, M (336) 9
 Grace, M (336) 73
- Hammond, L (337) 12
 Hampson, K (334) 58; (335) 36, 48
 Hardwicke, A J (336) 18
 Haresnape, J M (337) 75
 Harris, F (334) 29; (335) 9
 Harrison, T G (335) 97
 Hetherington, L (337) 59
 Hinson, D (337) 8
 Hockridge, E (336) 49
 Hoh, Y K (334) 113
 Howarth, S (336) 23
- Ingram, N (336) 23; (337) 87
 Ireson, G (334) 71; (337) 51
- Johnston, J (335) 81
 Jones, A (337) 41
- Liddicoat, B (335) 103
 Linthorst, J A (334) 10
 Lister, E (335) 43
 Lock, R (337) 9, 12, 16
- MacDonald, D (334) 16
 MacInnes, I (334) 15
 Magalhães, M C (335) 20
 Mansell, M (336) 89
 Markwick, A (336) 113
 McFarlane, A (336) 43
 Mikhailovsky, S V (335) 103
 Millar, R (334) 59; (337) 67
 Mortimer, R J (334) 71
- Nandhra, S (336) 113
 Newbury, H J (336) 33
- Osborne, C (335) 53, 55
 Osborne, C (335) 119
- Parry, M (334) 40, 41
 Perfect, E (336) 55
 Pilot, A (337) 28
 Potter, J C E (334) 37
- Raistrick, A (337) 19
 Randall, S (334) 43
 Read, D (336) 107
 Regan, T (336) 119
 Reigosa, C (334) 87
 Rowdene, N (334) 25
- Sansom, M (335) 103
 Saville, T (335) 32
 Shallcross, D E (335) 97
 Short, D (334) 23, 51
 Slingsby, D (336) 27
 Smith, S (334) 15
 Sosabowski, M H (335) 103
- Taber, K S (334) 119; (335) 87
 Talbot, C (334) 9; (335) 14, 34; (336) 15
 ten Hoor, M J (334) 26, 30
 Thomas, S (337) 21
 Thompson, M (335) 61
 Tosh, M (334) 51
 Turner, S (337) 51
 Twidle, J (334) 71; (337) 51
- van Rens, L (337) 28
 Viegas, A (335) 20
- Warren, J (334) 8, 42, 93; (337) 7
 Westbrook, G (334) 58; (335) 36, 48
 Weston, A (335) 81
 Woodley, E (335) 49
 Worrall, D R (334) 71
- Orger, B (335) 65