



The Journal of Emergent Science





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Cover Photo Courtesy of:

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Publisher:

Emergent Science Network
c/o ASE, College Lane, Hatfield,
Herts, AL10 9AA, UK

©Emergent Science Network 2014
ISSN: 2046-4754

The Journal of Emergent Science (JES) is published by the Emergent Science Network and is supported by the Association for Science Education (ASE).

This and subsequent editions of JES will be free to ASE members and available on subscription to others. For details of cost and subscription procedures please e-mail Jane Hanrott at janehanrott@ase.org.uk





Editorial

■ Jane Johnston

You can be forgiven if you are confused by the mixed messages about effective early years and science education and the part played by research in policy decisions. We are told that teaching should be a research-informed profession (DfCSF, 2007), that it is important to have professionals who are knowledgeable about the subject (NSLC, 2013), as well as how to teach the subject (e.g. Oversby, 2012). Extensive research and practice has told us that children learn best through experience and play (e.g. Johnston, 2013), that formal education should start at age 7 (*The Telegraph*, 2014). However, within the UK, we have been told that mathematics and physics PhD graduates do not need pedagogical knowledge or skills and will get cash incentives to teach (BBC News, 2014b) and that children should start formal education as young as 2 years of age (BBC News, 2014a).

The really worrying aspect of the mixed messages is that pronouncements about what is good education, and even important policy decisions, are made by those who have little or no expertise in science or early years education. So, politicians decide what, how and when children should learn about the world around them, as though children are not learning through exploration, experiences and interactions in their everyday, playful lives. Experts in one aspect or phase of learning feel able to extrapolate from this to another aspect or phase of learning. Most commonly, it is those with secondary science expertise who extrapolate from their secondary research or practice about what early years or primary science education should be. However, those who are scientists first and educationalists second may also have a very different stance on science educational research from those who are educationalists first and scientists second. All early years science professionals are skilled educationalists who also have a science expertise, and so they are best placed to know how young children can develop scientific understandings, skills and attitudes through engagement with the world and scientific phenomena around them.

The mixed messages we receive confuse parents and the general public who are often too trusting of the misplaced expertise as, surely, the Secretary of State for Education 'knows best' and so the early years science professional's expertise is devalued. However, to use a health analogy, we would wisely be concerned if a politician or a general practitioner told a neurosurgeon how s/he should operate on a patient and yet we are more accepting of similar poor practice in education.

The research published in *JES*, which represents best practice in early years science education, is unequivocal about the nature of early years science education. In this edition of *JES* there are some key messages from research; the importance of creative, informed interaction between children and adults; and how very different approaches can support children's scientific understandings. There is evidence that creative drama techniques ([Kambouri and Michaelides](#)) and dynamic interventions ([Pedregosa et al](#)) can facilitate learning in young children. In addition, the research indicates that an interdisciplinary approach ([Blasbalg and Arroio](#)), interest and pupil autonomy ([Windt et al](#)) and teacher interaction ([Emeji](#)), as well as encouraging children to read about science ([Yamahashi et al](#)) support scientific understanding.

We have come a long way in early years science education and our voices are being increasingly heard. Findings from our research and scholarship are impacting on practice and provision. What we should be saying loudly and clearly is that effective teaching and learning in early years science is a complex process, that there are many factors affecting it and that we should listen to the professional research rather than the rhetoric of governments.



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Jane Johnston

Co-Editor of the *Journal of Emergent Science*.





Contributing to the Journal of Emergent Science

Instructions for authors

The Journal of Emergent Science (JES) focuses on science (including health, technology and engineering) for young children from birth to 8 years of age. The key features of the journal are that it:

- is child-centred;
- focuses on scientific development of children from birth to 8 years of age, considering the transitions from one stage to the next;
- contains easily accessible yet rigorous support for the development of professional skills;
- focuses on effective early years science practice and leadership;
- considers the implications of research into emergent science practice and provision;
- contains exemplars of good learning and development firmly based in good practice;
- supports analysis and evaluation of professional practice.

The Editorial Board of the journal is composed of ASE members, including teachers and academics with national and international experience. Contributors should bear in mind that the readership is both national UK and international and also that they should consider the implications of their research on practice and provision in the early years.

The Editorial Board

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Please send all submissions to:

janehanrott@ase.org.uk in electronic form.

Articles submitted to *JES* should not be under consideration by any other journal, or have been published elsewhere, although previously published research may be submitted having been rewritten to facilitate access by professionals in the early years and with clear implications of the research on policy, practice and provision.

Contributions can be of two main types: full length papers of up to 5,000 words and shorter reports of work in progress or completed research of up to 2,500 words. In addition, the journal will review book and resources on early years science.

Guidelines on written style

Contributions should be written in a clear, straightforward style, accessible to professionals and avoiding acronyms and technical jargon wherever possible and with no footnotes. The contributions should be presented as a Word document (not a pdf) in Times New Roman point 12 with double spacing and with 2cm margins.

- The first page should include the name(s) of author(s), postal and e-mail address for contact.
- Page 2 should comprise of a 150-word abstract and up to five keywords.
- Names and affiliations should not be included on any page other than page 1 to facilitate anonymous refereeing.
- Tables, figures and artwork should be included in the text but should be clearly captioned/ labelled/ numbered.
- Illustrations should be clear, high definition jpeg in format.



- UK and not USA spelling is used i.e. colour not color; behaviour not behavior; programme not program; centre not center; analyse not analyze, etc.
- Single 'quotes' are used for quotations.
- Abbreviations and acronyms should be avoided. Where acronyms are used they should be spelled out the first time they are introduced in text or references. Thereafter the acronym can be used if appropriate.
- Children's ages should be used and not only grades or years of schooling to promote international understanding.
- References should be cited in the text first alphabetically, then by date, thus: (Vygotsky, 1962) and listed in alphabetical order in the reference section at the end of the paper. Authors should follow APA style (Author-date). If there are three, four or five authors, the first name and *et al* can be used. In the reference list all references should be set out in alphabetical order

Guidance on referencing:

Book

- Piaget, J. 1929 *The Child's Conception of the World*. New York: Harcourt
- Vygotsky, L. 1962 *Thought and Language*. Cambridge, MA: MIT Press

Chapter in book

- Piaget, J. 1976 'Mastery Play'. In Bruner, J., Jolly, A. & Syla, K. (Eds) *Play – Its role in Development and Evolution*. Middlesex: Penguin. pp 166-171

Journal article

- Reiss, M. & Tunnicliffe, S.D. 2002 'An International Study of Young People's Drawings of What is Inside Themselves', *Journal of Biological Education*, **36**, (2), 58–64

Reviewing process

Manuscripts are sent for blind peer-review to two members of the Editorial Board and/or guest reviewers. The review process generally requires three months. The receipt of submitted manuscripts will be acknowledged. Papers will then be passed onto one of the Editors, from whom a decision and reviewers' comments will be received when the peer-review has been completed.

Books for review

These should be addressed and sent to Jane Hanrott (JES), ASE, College Lane, Hatfield, Herts., AL10 9AA.

