

Open Research Online

The Open University's repository of research publications and other research outputs

Creativity in the primary curriculum

Book Section

How to cite:

Grainger, Teresa and Barnes, Jonathan (2006). Creativity in the primary curriculum. In: Arthur, James; Grainger, Teresa and Wray, David eds. Learning to Teach in the Primary School. London, UK: Routledge, pp. 209–225.

For guidance on citations see [FAQs](#).

© [not recorded]

Version: [not recorded]

Link(s) to article on publisher's website:

<http://www.routledge.com/books/Learning-to-Teach-in-the-Primary-School-isbn9780415359283>

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

oro.open.ac.uk

GRAINGER, T. and Barnes, J. (2006) Creativity in the Primary Curriculum in J. Arthur, T. GRAINGER and D. Wray. (eds.) *Learning to Teach in the Primary School* London: Routledge.pp.209-225.

Creativity in the Primary Curriculum

Teresa Grainger and Jonathan Barnes

The class was full of focussed learners, whose voices expressed urgency and interest as they collaborated in groups to create three dimensional representations of two Egyptian gods. Earlier that morning at Hackleton Primary School, Northampton, these six and seven year olds had discussed the many options available to them, generated and listened to each others ideas and were now turning their idea into action. They operated independently of their teacher, finding resources in their own room or in others, monitoring their achievements in the time available (they knew they would have another session to complete this challenge), and constantly evaluating and discussing their work. The variety generated was considerable, new ideas also emerged during the creative process and these too were celebrated and critically appraised. Later in this half term's unit of work on the Egyptians, they wrote up the instructions for making these images and added these to the huge class book produced, which also contained DVDs of the various cross curricula activities undertaken and showed the total transformation of the classroom into an Egyptian museum. However, their ability to recall, explain, and discuss the finer points of this creatively planned project two terms later was an even richer testimony to the excellence and enjoyment achieved by all.

In this school as in many others recently, the staff have been working to adopt a more creative approach to the primary curriculum and have placed creative teaching and learning at the heart of their practice. Influenced by a developed understanding of the nature of creativity, by government documents which encourage a more flexible stance (DfES,2003), by HMI reports which highlight the significant achievements in creative schools(OfSTED,2003) and by involvement in creative partnerships of all kinds, teachers are increasingly finding more innovative ways forward. Yet there is a danger that the development of creativity is viewed as merely as the latest bandwagon or yet another thing to add to schools' lists of priorities.

Working with an overloaded curriculum in a culture of accountability, you are no doubt already aware that the backwash of the assessment system markedly affects classroom practice. Such pressure can limit opportunities for creative endeavour and may tempt you to stay within the safe boundaries of the known, offering a curriculum largely framed and developed by others, rather than one framed and developed by you in response to your children's needs and interests. Recognising the tension between the incessant drive for measurable standards and the development of creative teaching is a good starting point, but finding the energy and enterprise to respond flexibly to this reality is the real challenge. In order to do so, you need to be convinced that creativity has an important role to play in education and realise that you can contribute to this personally and professionally. We hope you will choose to teach creatively and for creativity, and create the conditions in which creativity can thrive.

By the end of this chapter you should have

- An increased understanding about the nature of creativity
- An awareness of some of the features of creative primary teachers
- A wider understanding of teaching for creativity
- Some understanding of how to plan for creative learning

Creativity

In a world dominated by technological innovations, creativity is a critical component; human skills and people's powers of creativity and imagination are key resources in a knowledge driven economy (Robinson, 2000,). As social structures continue to change, the ability to live with uncertainty and deal with complexity is essential and organisations and governments worldwide are now more concerned than ever to promote creativity. It develops the kinds of skills that young people will need in a rapidly changing and uncertain world and it can improve their self-esteem, motivation and achievement. Creativity is not confined to special people or to particular arts based activities, nor is it undisciplined play, it is however, notoriously difficult to define. It has been described as 'a state of mind in which all our intelligences are working together' ...involving 'seeing, thinking and innovating' (Craft, 2000, p.38) and as 'imaginative activity fashioned so as to produce outcomes that are both original and of value' (NACCCE, 1999, p.29). Creativity is possible wherever human intelligence is actively engaged and is an essential part of an effective education; it includes all curriculum subjects and all children, teachers and others working in primary education. Indeed it can be demonstrated by anyone in any aspect of life, throughout life.

It is useful to distinguish between high creativity and ordinary creativity, between 'Big C Creativity', (exemplified in some of Gardner's (1993) studies of highly creative individuals, such as Picasso, Einstein and Freud) and 'little c creativity' which Craft (2000; 2001) highlights. This latter form focuses on the individual agency and resourcefulness of ordinary people to innovate and take action. Csikszentmihalyi suggests that each of us is born with two contradictory sets of instructions; a conservative tendency and an expansive tendency, but warns us that ...

If too few opportunities for curiosity are available, if too many obstacles are put in the way of risk and exploration, the motivation to engage in creative behaviour is easily extinguished.

(Csikszentmihalyi, 1996, p.11)

In the context of the classroom, developing opportunities for children to 'possibility think' their way forwards is therefore critical. This will involve you in immersing the class in an issue or subject and helping them ask questions, take risks, be imaginative and playfully explore options as well as innovate (Craft, 2001). At the core of such creative endeavour is the child's self determination and agency as an active thinker to find and solve problems. From this perspective, creativity is not seen as an event or a product, (although it may involve either or both), but a process or state of mind involving the serious play of ideas and possibilities. This generative, problem finding/ problem solving process may involve rational and non rational thought and may be fed by the intuitive, by daydreaming and pondering as

well as the application of knowledge and skills. In order to be creative children do need considerable knowledge in a domain, but ‘creativity and knowledge are two sides of the same psychological coin, not opposing forces’ (Boden, 2001, p.102) and imaginatively feed each other.

Imaginative activity can take many forms; it draws on a more varied range of human functioning than linear, logical and rational patterns of behaviour (Claxton, 1997). It is essentially generative and may include physical, social, reflective, musical, aural or visual thinking, involving children in activities which produce new and unusual connections between ideas, domains, processes and materials. When children and their teachers step outside the boundaries of predictability and are physically engaged, learning through their minds and bodies, eyes and ears, this provides a balance to the sedentary and too often abstract nature of school education. In less conventional contexts, new insights and connections may be made through analogy and metaphor. The two modes of creative thinking: the ‘imaginative-generative’ mode which produces outcomes, and the ‘critical-evaluative’ mode which involves consideration of originality and value (NACCCE, 1999, p.30), both operate in close interrelationship and need to be consciously developed.

Claxton and Lucas (2004) suggest that the process of creativity involves the ability to move freely between the different layers of our memories to find solutions to problems. They propose a metaphor of the mind based on the concept of three layers of memory which impact upon our thinking: an upper layer or *habit map* - a map of repeated patterns of behaviour, an *inner layer* comprised of individual conscious and unconscious memories, and an *archetypal layer* laid down by our genes. Others see the creative mind as one which looks for unexpected likenesses and connections between disparate domains (Koestler, 1964, Bronowski, 1976), however, Csikszentmihalyi (1996) suggests that creativity does not happen inside people’s heads, but in the interaction between an individual’s thoughts and the socio-cultural context. He proposes it is a product of societal judgements which involves interaction amongst a domain, a person and a field.

It is clear that creativity is not bound to particular subjects indeed it depends in part on interactions between feeling and thinking across different subject boundaries and ideas. It also depends upon a climate of trust, respect and support, an environment in which individual agency and self determination are fostered and ideas and interests are valued, discussed and celebrated. Yet we have all experienced schools that fail to teach the pleasure and excitement to be found in science or mathematics for example, or who let routines and timetables, subject boundaries and decontextualised knowledge dominate the daily diet of the young. In such sterile environments when formulae for learning are relied upon and curriculum packages are delivered, children’s ability to make connections and to imagine alternatives is markedly reduced. So too is their capacity for curiosity, for enquiry and for creativity itself.

Task One

Relevance, ownership and control of learning, as well as innovation, have all been identified as key issues in creative learning in children (Jeffrey and Woods, 2003).

Imaginative approaches involve individuals and groups in initiating questions and lines of

enquiry so that they are more in charge of their work, such collaboration and interaction helps to develop a greater sense of autonomy in the events which unfold.

To what extent have you observed children taking control of their learning, making choice, and demonstrating ownership of their own learning? Think of some examples and share these in small groups. To what extent was the work also relevant to the children? Were they emotionally or imaginatively engaged, building on areas of interest, maintaining their individuality and sharing ideas with one another? If you have seen little evidence of these issues, consider how you could offer more opportunity for relevance, ownership and control of learning in the classroom.

Creative Teaching and Teaching for Creativity

The distinction between creative teachers and teaching for creativity is a helpful one in that it is possible to imagine a creative teacher who personally enters creatively into the classroom context, yet fails to provide for children's creative learning.

Responsible creative professionals are not necessarily flamboyant performers, but teachers who use a range of approaches to create the conditions in which the creativity of others can flourish. Creative teachers also make use of their own creativity, not just to interest and engage the learners, but also to promote new thinking and learning. Their own creative assurance enables them to offer the children stronger scaffolds and spaces for emotional and intellectual growth.

Research undertaken in an HE context, with tutors teaching music, geography and English, suggests that creative teaching is a complex art form, a veritable 'cocktail party' (Grainger, Barnes and Scoffham, 2004). The host gathers the ingredients (the session content), and mixes them playfully and skilfully (the teaching style), in order to facilitate a creative party that is enjoyable and worthwhile (the learning experience). Whilst no formula was, or could be established for creative teaching, some of the ingredients for personally mixing a creative cocktail were identified, albeit tentatively, from this work. It is clear however, that the elements are not in themselves necessarily creative, but that the action of creatively shaking and stirring the ingredients and the individual experience of those attending are critical if the 'cocktail party' is to be successful. The intention to provoke creativity appeared to be an important feature in this work.

FIGURE 1 COCKTAIL PICTURE

The session content, (the cocktail ingredients), included the themes of placing current trends in a wider context and extensive use of metaphor, analogy and personal anecdotes to make connections. In the category of teaching style, (the mixing of the cocktail), themes identified included multi modal pedagogic practices, pace, humour, the confidence of the tutors and their ability to inspire and value the students. In relation to the learning experience, (the cocktail party) themes included involving the students affectively and physically and challenging them to engage and reflect. Together these represent some of the critical features of creative teachers and creative teaching which combine to support new thinking.

Task Two

Consider the metaphor of teaching as cocktail party for a moment. In what ways do you think this metaphor captures the vitality of teaching, the dynamic interplay between teachers, children and the resources available? Select one or two of the

features, humour or use of metaphor or personal anecdotes for example, do you make extensive use of either of these features? Remember as the research indicates, such features need to be employed with others in a flexible experiential encounter at the 'cocktail party'.

Consider your current tutors or previous teachers. Which are/were the most creative teachers? Do they/did they create successful cocktail parties in which you felt valued and were given the space to engage fully, to take risks, make connections and develop deep learning? How do/did they achieve this?

Personal characteristics of creative teachers

It is difficult to identify with any certainty the personal characteristics of creative teachers, although common elements observed in research studies and commented upon by writers in the field (e.g. Jones and Wyse 2004; Craft 2003; Beetlestone, 1998; Csikszentmihalyi, 1996; Fryer 1996) include the following:

- Enthusiasm, passion and commitment
- Risk taking
- A clear set of personal values
- Willingness to be intuitive and /or introspective
- Gregarious and introspective
- A deep curiosity or questioning stance
- Awareness of self as a creative being

This list encompasses many of the personal qualities you might expect in any good teacher, except perhaps the last. As Sternberg (1999) suggests, creative teachers are creative role models themselves, such professionals continue to be self-motivated learners, who value the creative dimensions of their own lives and make connections between their personal responses to experience and their teaching. In addition, a clear set of values, reflecting fair-mindedness, openness to evidence, a desire for clarity, and respect for others are important and among the attitudinal qualities embedded in creative teaching. So too is a commitment to inclusion, a belief in human rights and equality. Such attitudes and values have a critical role in creative teaching and are perhaps best taught by example.

Features of a creative pedagogical stance

The intention to promote creativity is fundamental; you will need to place children in situations which help them make connections and then build on these, creating a climate of enquiry, of ideas and of sensible risk-taking. You will also need to plan to develop their independence and ability to work as community. There are a number of features of a creative pedagogical stance which you may want to consider in relation to your teaching and observation of other creative professionals.

A learner centred ethos Creative teachers tend to place the learners above the curriculum and combine a positive disposition towards creativity and person-centred teaching which actively promotes pupils who learn and think for themselves (Craft, 2000). Relaxed, trusting educator – learner relationships exist in creative classrooms and the role of the affect and children's feelings play a central role in learning in such contexts. A creative ethos will also involve you showing patience and openness and reinforcing children's creative behaviour, celebrating difference, diversity and innovation as well as learning to tolerate mild or polite rebellion (Gardner, 1999). If

you adopt such a person centred orientation you will be shaping the children's self esteem and enhancing their intrinsic motivation and agency.

A questioning stance Creativity involves asking and attempting to answer real questions and the creative teacher is seen by many writers as one who uses open questions and who promotes speculation in the classroom encouraging deeper understanding and lateral thinking. In the context of creative teaching, both teachers and children need to be involved in this process of imaginative thinking, encompassing the generation of challenging and unusual questions and the creation of possible responses (Cremin, 2003).

Creating space, time and freedom to make connections Creativity requires space, time and a degree of freedom, deep immersion in an area or activity allows options to remain open, and persistence and follow through to develop. Conceptual space allows children to converse, challenge and negotiate meanings and possibilities together. In recent Primary National Strategy research, teachers worked with more extended and coherent units of work, and through employing both film and drama raised both standards and boys' creativity in writing (Bearne et al., 2004).

Employing multi modal teaching approaches A variety of multi-modal teaching approaches and frequent switching between modes in a play like and spontaneous manner supports creative learning. The diversity of pattern, rhythm and pace used by creative teachers is particularly marked (e.g. Woods, 1995) as is their use of informed intuition. As you teach, opportunities will arise to use your intuition and move from the security of the known, give yourself permission to go beyond the 'script' you have planned, allow the children to take the initiative and lead you. Afterwards consider the effect of this more responsive approach, did the children exert their autonomy, were they more fully engaged and intrinsically motivated?

Prompting full engagement, ownership and ongoing reflection In studying an area in depth children should experience both explicit instruction and space for exploration and discovery. Try to provide opportunities for choice and be prepared to spend some time developing their self management skills so they are able to operate independently. Their full engagement can be prompted through appealing to their own interests and passions, by involving them in imaginative experiences, and by connecting their learning to their lives (Grainger et al., 2005). You will find that as the children realise their questions make a difference, they will begin to ask more, ponder longer and reflect upon other ways to achieve a task or represent their learning. A semi constant oscillation between engagement and reflection will become noticeable in the classroom as you work to refine, reshape and improve learning. The ability to give and receive criticism is an essential part of creativity and you will need to encourage evaluation through supportive and honest feedback.

Modelling risk taking and enabling the children to take risks too The ability to tolerate ambiguity is an example of the 'confident uncertainty' to which Claxton (1998) refers when discussing creative teachers, those who combine subject and pedagogical knowledge, but also leave space for uncertainty and the unknown. You will gain in confidence through increased subject knowledge, through experience and reflection, but your assurance will also grow through taking risks and having a go at

expressing yourself. Risk taking is an integral element of creativity, and one which you will want to model and foster. The children too will need to feel supported as they take risks in safe non judgemental contexts.

To be a creative practitioner you will need more than a working knowledge of prescribed curriculum requirements, you will need a secure pedagogical understanding and strong subject knowledge, supported by a passionate belief in the potential of creative teaching to engage, inspire and educate. Such teaching depends in the last analysis upon the human interaction between teacher and student and is also influenced by the environment

Creating Environments of Possibility

You may have been to a school where creativity is planned for, where there is a clear sense of shared values and often a real buzz of purposeful and exciting activity. Such schools have a distinctive character which impacts upon general behaviour, relationships, physical environment and curriculum. An ethos which values creativity will, according to most definitions, promote originality and the use of the imagination, and encourage an adventurous attitude to life and learning. In such environments of possibility, packed with ideas and experiences, resources and choices, as well as time for relaxation and rumination, physical, conceptual and emotional space is offered.

The social and emotional environment

Taking creative risks and moving forward in learning is heavily dependent upon an atmosphere of genuine acceptance and security. As Halpin notes,

‘...pupils(should be able to) feel confident enough to take risks and learn from failure instead of being branded by it. ...they should react positively to self help questions like; ‘Am I safe here?’ ‘Do I belong?’ ‘Can I count on others to support me?’

(Halpin, 2003, p111)

The sense of well-being which offers a positive answer to these questions is promoted in creative schools by respecting individuals and involving children in activities which affirm both their individuality and their common humanity. Children’s well-being now forms an important part of school self evaluation (OFSTED, 2004), school inspection requirements (DfES, 2005) and the guidance related to the Children Act (HM Gov. 2005). A secure ethos in the context of the creative school may however display apparently contradictory characteristics. It is likely to be both:

- highly active and relaxed
- supportive and challenging
- confident and speculative
- playful and serious
- focused and fuzzy
- individualistic and communal
- understood personally and owned by all
- non-competitive and ambitious

Since Plato many have argued that there are links between involvement in creative acts and a general sense of well being. More recent research in cognitive neuroscience (Damasio, 2003) and positive psychology (Seligman, 2004; Fredrickson, 2003) has suggested that simply feeling 'happy' promotes optimum conditions in both mind and body, and also ensures constructive and secure relationships. This has led some to make arguments for a thorough re-evaluation of curricula, in favour of educational programmes which offer frequent, planned and progressive creative opportunities across every discipline (Gardner, 1999, Barnes, 2005).

The physical environment

The physical environment in a school which promotes creativity is likely to celebrate achievement and individuality. Jeffrey and Woods (2003) have shown it can affect every aspect of the environment which is not only stimulating, but is also a valuable teaching resource. Children's views on this are important and deserve to be taken into account (Burke and Grosvenor, 2003). Recent projects have shown how creative thinking in the context of focused work on improving the school building, grounds or local areas, can achieve major citizenship objectives and high level arts and literacy targets in an atmosphere of genuine support and community concern (Barnes, 2005).

Active modes of learning and problem solving approaches which include independent investigation require accessible resources of various kinds, so the richer and more multi-faceted range you can offer the better, This supports genuine choice, speculation and experimentation, happy accidents and flexibility. As well as good quality equipment and resources for each discipline, schools may want to collect the following:

- objects (like; crockery, etchings, machines and containers) chosen to suggest links between subjects
- games and toys (commercial or home made) to add amusement, challenge and variety
- items (like; religious objects, fabrics, art and craft, foods, plants) representing the range of cultures in school and society
- tools and artefacts (e.g.; mystery objects from the local museum service) to encourage deeper thinking
- creative professionals (like; hairdressers, architects, artists, town planners, website designers, advertisers, window dressers) from the community willing to work with pupils
- tools (such as those used by Geography. Maths, ICT, Science and D/T) which promote the use of hands and bodies
- products which reflect current technologies
- communications technologies to aid understanding and engagement.

Task Three

In groups of four, use the classroom plan below and 16 stickers to represent desks and 29 red 'blobs' to represent children and plan a classroom designed to promote creativity. You might want to consider the following issues:

- *How are you going to make fullest use of the view?*
- *Where will resources be stored?*
- *How are you going to group the desks for maximum flexibility?*
- *Will you need a teacher's desk?*

- *How can you make fullest use of the door to the playground?*
- *How are you going to create themed activity areas?*
- *How can the room design promote connection making?*
- *How are the display spaces going to be used?*
- *Do you need to use all the tables?*
- *How can you cater for the child who likes to be on their own sometimes?*

FIGURE 2 DIAGRAM OF CLASSROOM

Planning for creativity

The NC, with its reminders about linking subjects and programmes of study is open to imaginative interpretation, and can support cross curricular planning and creative practice across Foundation and KS1 and 2. Recent documentation from the government in England clearly promotes a broader approach to curriculum planning, supporting not only excellence and enjoyment, but also transferable learning, creativity and confidence. Such a holistic approach needs to build on insights from research if it is to ensure progression and raise standards.

Ten suggestions from research

- Create a **positive, secure and comfortable** atmosphere (Bentley and Seltzer, 1999)
- Ensure a range of **practical, creative and analytical** activities for each child (Sternberg, 1997)
- Have **clear goals** and individualised targets a little above current ability (Csikszentmihalyi, 2002)
- Use a manageable number of **relevant subjects** to throw light on the topic (Gardner, 1999)
- Build **emotionally significant links** to the life of each child and engage all the senses and use tools and objects to support and promote thinking (Damasio, 2003)
- Involve developmentally appropriate **progression** in skills, knowledge and understanding (Thompson et al. 2004)
- Refer to a wider framework which includes **concepts, content and attitudes** (Grainger, Barnes and Scoffham, 2004)
- Emphasise individual and cooperative **thinking and learning** throughout (Bruner, 1996; Craft, 2000)
- Provide supportive **assessment** procedures which build security and include time and tools for reflection (Adey and Shayer, 2002)
- Offer a wide range of opportunities to discover **engagement, enjoyment** and other **positive emotions** (Fredrickson, 2000, 2003)

Key Stage 1 teachers have generally retained a cross curricular element in their planning; those in Key Stage 2 are now considering the advantages of more creative curriculum approaches. Many now plan coherent learning experiences where 'school subjects [are seen as] resources in the construction of the curriculum, rather than determinants of its overall structure and emphasis' (Halpin, 2003, p. 114). They plan in teams and maximise the relevance of their curriculum to the local community and

the children's lives, using the rich physical, human and cultural resources of their locality and preparing significant shared experiences for children to interpret in individualised ways.

Teachers are beginning to work from the Key Skills and the thinking skills at the front of the NC, perceiving these to offer the permission and structure needed to support medium term planning for creativity. Their challenge, like yours, is to take account of individual differences in learning, help each child become a self-regulated learner, and ensure appropriate coverage of subject specific content. The curriculum map (figure 3) is one attempt to balance these demands. As a medium term plan it seeks to combine guidance from research with the detailed expectations of the NC. It builds upon the Key Skills, namely:

- Communication
- Application of number
- Information Technology
- Working with others
- Improving own learning and performance
- Problem solving

It highlights the thinking skills identified in the NC, namely:

- Information processing
- Reasoning
- Enquiry
- Creative thinking
- Evaluation

It also takes into account other cross curricular aspects, such as:

- financial capability
- enterprise education
- education for sustainable development
- PSHE/Citizenship
- statement of values

FIGURE 3 THE CURRICULUM MAP IN HERE

Integrating the Key Skills

Classrooms in which the key skills are explored through the subjects are characterised by activity, security, inclusivity and the equal treatment of different ways of understanding. At different times there could be different centres within the room where children can develop an idea musically, physically, spatially, socially, or practically on their own or in groups. Allowing children to work on a given theme in their areas of strength promotes connections as different groups make and share links between the subject disciplines and real life experience.

Communication Reading, writing, speaking and listening should be encouraged in meaningful contexts across all school experience, but there are many other means of communication. We communicate multimodally through play, pictures and symbols, music, number, dance and mime, in facial expressions and body language. Schools can maximise upon alternative modes of communication by offering children different ways to present their learning, understanding in PE may be better communicated in movement for example or in history by an exhibition of artefacts.

Application of number Number is one of the languages through which children can understand curriculum themes. In topics centred on design/technology, art and PE they can practically apply concepts of weight, measurement, symmetry and balance. In geography and history, distance, graphs, statistics, scale and time are key to understanding the wider world. A theme illuminated by the perspectives of music, RE, MFL, English or Science may need number to help children understand sonic, spiritual, linguistic and natural patterns around them.

Information technology The challenge is to ensure IT supports the progressive development of skills, knowledge and understanding across the curriculum. A class in rural Kent for example, used digital cameras to record significant aspects of their locality and classified these into four categories; ‘natural life’, ‘our historic environment’, ‘working in our village’ and ‘what’s changing?’ The development of their understanding could be traced in the discussions, selections and poster presentations which accompanied this activity. In other contexts, teachers use digital sound technology and the internet to provide children with opportunities to make new connections.

Working with others Group work on real-life, curriculum-based challenges can help to develop emotional literacy. The capacity to relate, to empathise and experience both leadership and ‘followership’, as well as cope with disputes and disappointments are all evident in real group work where pupils need to co-operate fully in order to achieve their goals.

Improving own learning and performance Reflection has been shown to make a marked influence on learning (Shayer and Adey, 2002). In general, questions like: ‘What do you think we are going to have to think about?’, ‘What could you do if you have problems?’, ‘How do you know that?’, ‘What might make this easier?’ How are we going to do this?’, ‘What might happen if...?’ and ‘Are there other ways this can be done?’ can stimulate creative thinking. But learning and performance are improved not just by thinking, but also by applying progressively more challenging subject skills to the topic.

Problem solving If children are given authentic situations to interpret, real challenges to meet, and relevant contexts to work they will operate in ‘problem-solving’ mode and generate new understanding in the process (Perkins, 1992; 2000). A Reception class for example was taken to the beach and groups were set the task of describing to their French sister schools what the place was like, without words. The children discussed the problem, shared solutions and embarked upon drawing, collecting, recording sounds, taking photos and making music. On their return to school their next problem was how best to send their work to France.

Task Four

In groups plan a short field trip very near to a school you know. Generate four ‘problems’ which children might safely be faced with in this context. Suggest the skills which would be needed to approach these problems and activities designed to help solve them. Decide on the key skills and curriculum areas this activity would address.

In conclusion

Creative teaching is a collaborative enterprise which capitalises on the unexpected and variously involves engagement, reflection and transformation, patterned at such a rate as to invite and encourage a questioning stance and motivate self directed learning. Creative learning involves asking questions, exploring options and generating and appraising ideas as you take risks and imaginatively think your way forwards and make new or innovative connections. We trust you will choose to teach creatively and promote creativity through your planning, building in choice and autonomy, relevance, and purpose in an environment of possibility.

Further Reading

Craft, A. (2000) *Creativity across the Primary Curriculum: Framing and Developing Practice*, London: RoutledgeFalmer.

This is an inspiring read, practically based but informed by theory and research Anna Craft explores core principles and the different subjects and considers ways in which teachers can develop a more ‘creative mindset’ towards the curriculum and pedagogy. A breakthrough when it was published this book is both accessible and thought provoking.

Scoffham, S (Ed) (2004) *Primary Geography Handbook*, Sheffield, The Geographical Association

This subject based handbook for teachers has a wealth of well tried and practical examples of creativity applied to geography. Chapters on ‘Young Geographers’, ‘Geography, creativity and place’, ‘Geography and the emotions’ and ‘Making geography fun,’ show how creative teaching and promoting creative thinking in children is central to a subject not usually thought of as being creative.

Halpin, D (2003) *Hope and Education; The Role of the Utopian Imagination*, London, RoutledgeFalmer

A very accessible, passionate but philosophically sound argument for putting the hope back into education. Professor Halpin concentrates on the need to change educators’ attitudes towards a more child centred, creative and culturally sensitive curriculum. In his mind establishing an ethos of security where no child feels ‘a loser’ is central to promoting creativity.

References

Abbs, P. (2003) *Against the Flow*, London, Routledge.

Adey, P and Shayer, M, (2002) *Learning Intelligence; Cognitive acceleration from 5 to 15 years* London, Open University Press

Barnes, J. (2005) “You could see it on their faces...”: The importance of provoking smiles in schools *Health Education*, August 2005. pp

Burke, C. and Grosvenor, I, (2003) *The school I’d Like; children and young people’s reflections on an education for the 21st century*, London , Routledge

Claxton, G. (1997) *Hare Brain, Tortoise Mind: Why Intelligence Increases when you Think Less*, London: Fourth Estate.

Claxton, G and Lucas, B (2004) *Be Creative; Essential steps to revitalize your work and life*, London, BBC.

- Craft, A. (2000) *Creativity Across the Primary Curriculum: Framing and Developing Practice*, London: RoutledgeFalmer.
- Craft, A.(2001) 'Little c: creativity in craft', in A. Craft, B. Jeffrey and M. Liebling (eds) *Creativity in Education*, London: Continuum.
- Cremin, M. (2004) 'The role of the imagination in classroom drama', unpublished dissertation, Canterbury Christ Church University College, Canterbury.
- Csikszentmihalyi, M. (1996) *Creativity: Flow and the Psychology of discovery and invention.*, New York, Harper.
- Damasio. A (1995) *Descartes' Error*. Quill:NY
- Damasio, A (2003) *Looking for Spinoza,: Joy, Sorrow and the feeling Brain*, Orlando, Harcourt
- Fisher, R. (1999) *Head start: How to develop your child's mind*. Souvenir Press :London
- Fisher, R (2003) Thinking skills, creative thinking, *Junior Education*, p 29, May
- Gardner, H (2000) *Intelligence Reframed; Multiple Intelligences for the 21st century*, New York, Basic Books
- Gardner, H (1999) *The disciplined Mind*. New York :Simon and Schuster
- Gardner, H. (1999) *Intelligence Reframed*. New York :Basic Books
- Goleman, D.(1996) *Emotional Intelligence*. London:Bloomsbury
- Goleman, D (1999) *Working with Emotional Intelligence*. London:Bloomsbury
- Grainger, T. Goouch, K. and Lambirth, A. (2005) *Creativity and Writing : Developing Voice and Verve in the classroom* London :Routledge
- Grainger, T. Barnes, J. and Scoffman, S. (2004) Creative Teaching: a creative cocktail *Journal of Education and Teaching* vol. 38:3.pp.243-253
- Grainger, T. (2003) Creative Teachers and the Language Arts: Possibilities and Potential, *Education 3-13*, vol. 31:1, pp. 43-48.
- Halpin, (2003) *Hope and Education; the Role of the Utopian Imagination*, Routledge, London
- Jeffrey, B. and Woods, P. (2003) *The Creative School: A Framework for Success, Quality and Effectiveness*, London: Routledge, Falmer
- Koestler, A (1964) *the Act of Creation*, London, Penguin
- NACCCE(1999) *All Our Futures, the report of the National Advisory Committee on Creative and Cultural education*, London: DfEE/DCMS
- Nikerson,R.S.(1999. in Sternberg, R. (Ed)*The handbook of creativity*, Cambridge
- Perkins, D (1992) *Smart schools*. New York: Free Press
- Perkins, D (2000) *The Eureka Effect; The arts and Logic of Breakthrough Thinking*, New York,:Norton.
- Robertson, I (1999) *Mind Sculpture*. London: Bantam
- Robertson, I(2002) *The Mind's Eye*. London: Bantam
- Robinson. K. (2001) *Out of Our Minds* Capstone: London
- Seltzer, K. and Bentley, T (1999) *The creative Age: Knowledge and Skills for the New Economy*, London, Demos
- Starko,A ((2001) *Creativity in the Classroom*, London, Lawrence Erlbaum.
- Seligman, M (2004) *Authentic Happiness*, NY, Free Press
- Sternberg, R. (Ed) (1999) *The Handbook of Creativity*, Cambridge, Cambridge University Press
- Woods, P. (1995) *Creative Teachers in Primary Schools* Buckingham : Open University press

Websites

DfEE/DCMS (1999) *All Our Futures: Creativity, Culture and Education* can be downloaded from www.dfes.gov.uk/nacce/index1.shtml. (Accessed online April 2005)

HM. Government (2005) *The Education Act 2005-04-12*

http://blackboard.cant.ac.uk/courses/1/ED03DEPRODE/content/68689_1/Ed_20Act_2005_202005097.pdf (accessed online April 2005)

OFSTED (2003) *Expecting the Unexpected* can be downloaded from www.ofsted.gov.uk/publications/

	What's the problem? (Problem solving skills)	How can we organise it? (Working with others)	How's it going to help children's learning? (improving own learning)	How are we going to include opportunities for maths? (Application of Number)	How am I going to help my children see themselves as thinkers? (Thinking Skills)	How am I going to use ICT/ (Information technology)
Theme:	A visit to the site	Of the new	bypass			
Science Finding out about classification, mini beast life and sustainability	We want to find out more about mini beasts' habitats, life cycles, food and how we can classify them	Individual group responses to various Science problems: classification, preferred habitats, life cycle, food	Making and testing hypotheses	Fibonacci series Numbers in natural objects; petals, leaves, sea shells) Classification . Moral considerations	(Information processing (Reasoning (Enquiry (Evaluation: all involved	Variety of life. Take close up photos and video footage of insects in their habitat
English -using the road to generate a debate/writing a road story	We've got to work out the pros and cons of building a bypass around our village	Questionnaires Group evaluations Debates Role play	What would happen if...?,'Are there any other ways this can be done?' and 'What will it be like when..?'	Using numbers to make the arguments, numbers of people affected, traffic, animals etc.	Information processing Evaluation thinking: What do we think about this issue?	Word processing Stimulus material from the web
	Work in the school	Locality for the	School website			
Geography - discovering what the locality is like now.	We have to prepare a introduction to our local area for the school website	Field work Role play a issue related to change in the locality. Group map making.	What do different kinds of people think of living here? What are the problems? What are the benefits?	Mapping Traffic survey Using maps at different scales Making graphs	Creative thinking: How can we represent this area on a map? Enquiry thinking: What do we like/dislike about our locality?	Current information from the www CD ROM/ GIS satellite images and packages like Digital worlds
History - finding out about the locality in the past.	We have to make a history page for the school website	Class discussion on issue in history eg: Separate Girls and Boys entrance.	Imagine what it was like then. Consider different perspectives	Presenting of numerical data. Comparing dimensions of school hall/ classrooms with old plans	Information processing: deciding on which information to include and which to leave out	Making links to Census and other historical information on web, collect and evaluate different sources
Mathematics – presenting the facts and figures about the locality.	We've got to present statistics about the local area for our project	Teams challenged to make the clearest graph	'What are we going to need to think about if this graph is to be clear?'	Applying number to real situations	Creative thinking: new presentation ideas Information processing	Using calculators, different measures, collecting data
Modern Foreign Language. Making the school website attractive to people from other countries.	Designing a welcome page for visitors from other European countries	Role play in foreign language	Appreciating the perspective of outsiders	Counting in foreign languages, simple mathematical problems in French, Spanish or German	Evaluation: Why might this be a good thing?	Translators Foreign sites Background information on the web CD ROM packages
	Work in the	School grounds	To find and	Investigate mini beasts		
Music Making music to accompany a mini beast film.	Our film needs music which help people understand the life and wonder of tiny creatures	Group composition, children work in groups to make music for slugs, ants, woodlice, centipedes etc.	How can we make this more surprising, how can we use patterns, silence, symmetry in our music? How could we improve it?	Beats in a bar Number patterns in music (Gamelan) Drumming patterns Repeating patterns	Creative thinking: using sound to represent animate objects	Digital keyboards Altered environmental sounds Using CD, Mini disc, video DVD on insect life. Making own video
Physical Education Making a mini beast dance, movement or body sculpture	We have to make a dance or movement on the theme of insects	Group planning and performance of dance /movement routines. Group decisions on body sculpture	Negotiating movement/dance decisions, evaluating / planning improvements.	Numbered sequences Eg. Dance movements. Sale of tickets to performances	Creative thinking: using body movements and shape to suggest mini beast movement and life.	Use of music examples from the web or CD/ Video of skills/ stimulus Make DVD of final product
Religious Education Asking the big questions	Thinking about the significance of the natural world. Expressing feelings in poems, lists, music or painting	Paired discussion, 'Why do you think God made insects?' Are there any things we can't see?	Thinking about the purpose/ sustainability/quality of life issues. The seen and unseen world.	Significant numbers, 3, 7, 12 Numbers in nature	Reasoning: asking the why question Evaluation: asking why this is valuable?	Stimulus for reflection Other cultures views on insects (eg San ('Bushmen') and the Mantis.). Record reflections for DVD

