



STEM Science Technology Engineering & Maths CPD

LEARN HOW TO EMBED STEM WITHIN PROVISION

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Description:

This CPD day looks at ways in which we can embed STEM (Science, Technology, Engineering and Mathematics) subjects within early years practice. STEM, often referred to as STEAM - as it is seen that the arts can be an integrating link between the separate disciplines that are often seen as being isolated and unconnected to the other areas.

During the day I will provide many examples of different media and provocations that can provide rich experiences of STEM curriculum, in imaginative and creative ways. We will see how we can weave together the different disciplines.

At the heart of STEM is children's enquiry: building upon in their curiosity and posing new questions about the world around them as they begin to construct meaning. Play is central; playing with ideas and possibilities. In this sense I advocate a holistic transdisciplinary approach whereby children are enabled to express their ideas, develop working theories, hypothesise and problem solve. Children's creative and critical thinking skills are central. It's all about children developing their understandings, for example with using their emergent mathematical thinking to problem solve. We will look at how both indoor and outdoor environments can be utilized to support emerging thinking around STEM areas of learning.

The session will look at the theory that underpins practice and well as looking a wide selection of examples in practice such as looking at various types of construction such as blocks/ woodwork/ stick and pea, to the use of basic coding to program a robot, exploring pulleys and scales, embracing digital media – such as photography and webcams and much more. The day will also include practical sessions offering hands on exploration of the various examples.

Handouts, links and a booklist are included to compliment the CPD.

Aims and Objectives: From this course you will:

- Understand the theory and pedagogical contexts
- Become familiar with a variety of media and provocations that can support STEM
- Learn how STEM can support open ended enquiry based learning
- Learn how STEM can support creativity and imagination
- See how STEM can support all learning areas in relation to the wider curriculum
- Examine how makerspaces and tinkering labs can support STEM
- See how STEM activities can facilitate cooperation and encourage communication
- View examples of children's STEM explorations from various countries
- Have a hands-on session working with STEM materials

Pete Moorhouse is an early years creative consultant. He is an associate trainer for Early Education and a Froebel tutor and has delivered training in many countries. He is the author of several journal articles and books and was awarded an honorary research fellowship at Bristol University, currently researching creative and critical thinking in early years. Pete won the national award from the Creative Learning Guild for his work promoting creativity in education and is Fellow of the Royal Society of Arts and a Churchill Fellow.

AUDIENCE: EARLY YEARS LEADERS, MANAGERS, TEACHERS & PRACTITIONERS
SESSION: INSET DAY

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