



PPRIMARY PUPILS: WORKING SCIENTIFICALLY OR WORKING MATHEMATICALLY?

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Abstract

This paper examines the contribution of an integrated approach to the teaching and learning of two important primary STEM subjects mathematics and science. The paper begins by considering recent developments in the United Kingdom. The two subjects are presented and links between the two established. The skills of science and mathematics are compared and areas of overlap identified. These skills are then considered in more detail and the ways that investigations can be approached from both a mathematical and scientific perspective. The paper explores what it is to work scientifically and to work mathematically and concludes that the two subjects are valuable in their own rights but that they both benefit from their integration. The importance of working mathematically to mathematics education and of working scientifically to science education are emphasised and the value of curricula which lack these elements are considered. The paper suggests that perhaps these sets of skills are best considered as one set of skills, that our artificial subject distinctions cause a blurring which for some individuals is a strength but for others especially young learners may cause confusion. The paper concludes that there is considerable scope for the integration of STEM subjects, mathematics and science in particular but that the success of this integration is down to skilful teaching by thoughtful practitioners.

Keywords: Mathematics, science, integration.