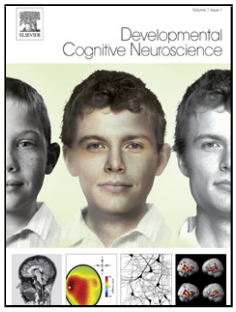

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Hippocampal spatial mechanisms relate to the development of arithmetic symbol processing in children

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Abstract

Understanding the meaning of abstract mathematical symbols is a cornerstone of arithmetic learning in children. Although studies have long focused on the role of spatial intuitions in the processing of numerals, it has been argued that such intuitions may also underlie symbols conveying fundamental arithmetic concepts, such as arithmetic operators. In the present cross-sectional study, we used fMRI to investigate how and when associations between arithmetic operators and spatial brain activity emerge in children from 3rd to 10th grade. We found that the mere perception of a '+' sign