

Making Meaning with Models

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Abstract: Narrow interpretations of Piagetian theory have led to assumptions that children are unable to grasp complex concepts, yet Bruner contended that any subject could be taught to any child in some intellectually honest way. Our work with separate groups of primary-aged children, in different scientific fields, indicates that children can attain understandings of complex concepts, particularly with the aid of tangible models. Children aged 7 and 10 years used a simple model made of wool to understand aspects of DNA, genes and inheritance, and children aged 9 years used models of atomic orbitals and magnetic atoms of elements to understand aspects of atomic-molecular theory.

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