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Extending explicit and linearly implicit ODE solvers for index-1 DAEs.

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Kurzfassung

Fifty six children, aged between four and eleven years of age, in seven groups, were videoed playing with, being questioned about and sorting a collection of toys in order to identify what skills of observation looked like in young children, how observations influenced other scientific skills and what supported the skill of observation. Children's skills of observation were found to be similar across all ages and included affective, functional, social and exploratory comments, actions and questions. These initial observations led to the use of other scientific process skills: classification, prediction, hypotheses, along with explanation for younger children and interpretations for older children. There was generally a greater sophistication of observation skills with increasing age of the children. Observation in young children was found to be tactile and developed in two ways; by engaging in more unique close observation and interpreting observation by utilising previous knowledge and experiences. Important factors affecting the development of observational and other scientific skills were found to be the context (activity, environment, resources) and combination of social interactions between individuals, peers and adults. This combination supported the development of both observational and other scientific skills, although the nature and amount of this interaction appeared individual to different groups of children and could not be predicted.