The purpose of this presentation is to demonstrate the new version of the PICCO –program, to describe the aim of PICCO as children’s spontaneous exploration tool and to introduce research results when using PICCO in day care centres and at school. The chosen natural phenomenon for the pictorial computer simulation, PICCO, was the variations of sunlight and the heat of the sun experienced on the earth related to the positions of the Earth and the Sun in space. It is important to investigate children’s science learning and knowledge construction process in new multimedia technology environments, to find the possibilities of new technology for science learning and to reveal those integrated and intertwined cognitive and social processes which are the basis for science learning and thinking by children.