Teaching Science Through Inquiry.
Discovering the Mirror in Kindergarten and Grades 1&2.

By Welmoet Damsma

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Amstel Instituut-Universiteit van Amsterdam

Abstract

This thesis reports on the development and evaluation of a lesson series about mirrors for grades 1&2 and Kindergarten. The main goals of the lesson series were to arouse interest in science in the children, to let the children work inquiry-based and to give the teacher an easy-to-use science module. The lesson series was developed with specific conditions in mind, such as easy usability and no necessity for the teacher to have prior knowledge. Two teachers were involved in the developmental phase, three more teachers tested the materials afterward. Most lessons were observed, some were videotaped. Students and teachers were post-interviewed. Afterwards, experiments were done with the children to establish how much they learned from the lessons.

The interviews and lesson analysis show that the lesson series does fulfill the initial conditions (such as being inquiry-based and easy-to-use). The students and teachers were all very enthusiastic about the lessons and students’ interest in science was aroused. The students also remember the lessons very well and could reproduce the results of the lessons months after the lessons took place. What exactly they learned about the science behind mirrors remains unclear. The teachers evaluated the materials in a positive way and expressed their intent to use them again.