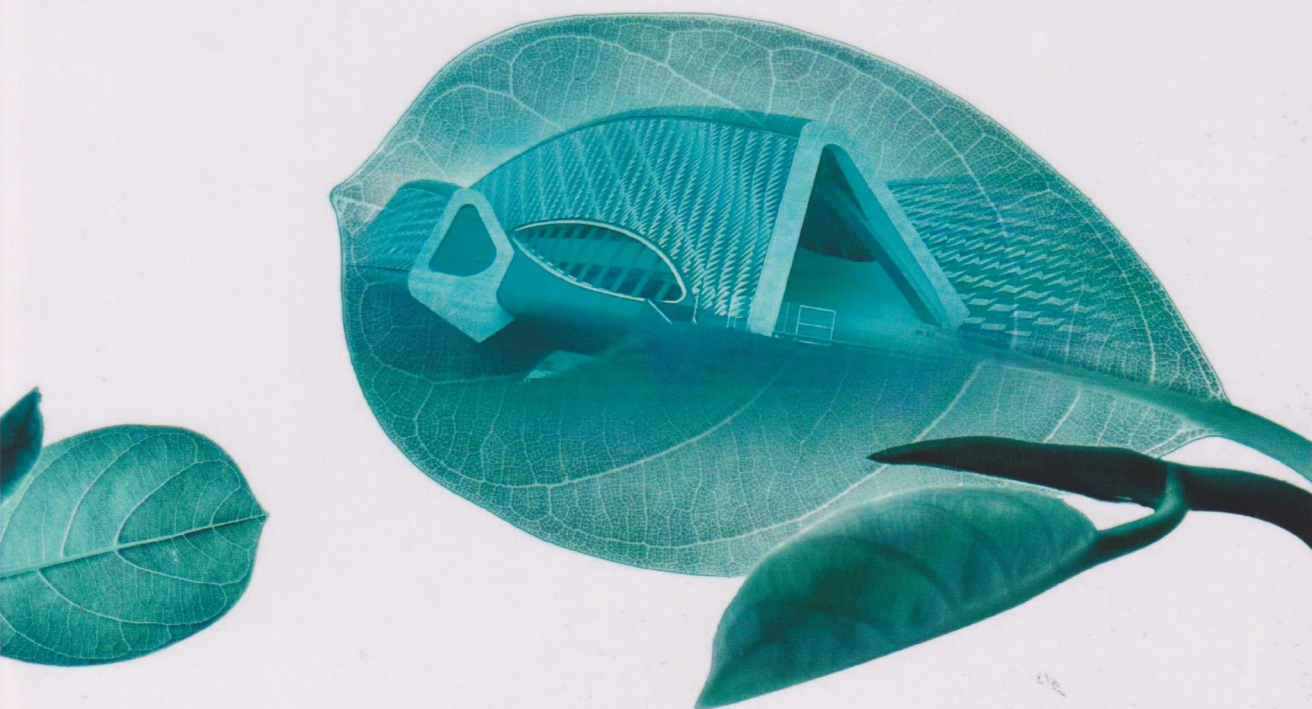


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Primary school health education: how children can learn about microbes and hands hygiene

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Today's society requires that citizens have increasingly scientific training adapted to the new demands of a globalizing and technologically advanced world. Therefore it is necessary to adjust the curricula and teaching methodologies so that scientific training can be applied to real and current situations of pupils' personal and social lives, thus contributing to improve their scientific literacy. The experimental teaching of science is seen as an effective methodology facilitating the development of pupils' manipulative and reasoning capabilities, allowing a better understanding of the world around them. In order to promote experimental teaching on microbes in primary school, a proposal for health education focused on the topic hand hygiene was developed. This practical activity was tested with sixteen students of the 4th grade and focused on the question-problem: Why should we wash our hands before eating?

The teacher implemented the experimental activity by promoting intense critical thinking about pupils' predictions, their observations and answers to the question-problem. The pupils' experimental procedure document served as a guide and as a notepad, having the following structure:

- a) "Problem-question": initial question to be answered at the end of the activity;
- b) "Before the experience": students registered their predictions;
- c) "Experience": some specific procedures to be followed and designated spaces for pupils recording their observations;
- d) "After the experience": reflection on their observations (and their records) by comparing them with the initial predictions, as well as the registration of the answer(s) to the question-problem.

With one washed hand and another unwashed, one pupil per group rubbed two plates with medium and, after two days, observed and counted the number of colonies formed. Results showed that pupils came to recognise that they have bacteria on their hands and verified the effectiveness of a reduction in the handwashing process. The teacher promoted pupils discussing about their results so that they realized that bacteria can be responsible for potential diseases, especially if they do not wash their hands before meals. It was concluded that this activity can help children, as early as at the primary school, to understand what microorganisms are and the healthy reason for hand hygiene, being more than just a rule to comply.