PROFILES IBSE Teaching/Learning Materials – Overview

compiled by the PROFILES Working Group of the Freie Universität Berlin – Germany

KieWi & Co. – Ways into the Microscopic World: "What happens to the ice cubes in my soft drink?"

A Module for Science Instruction – especially Chemistry – for Grades 5 to 7

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Abstract

Current curricula for science subjects call for the use of "simple" particle models in order to explain the structure of matter in lessons for young students new to science. Surveys in the area of science education come to the conclusion that only few school students develop an appropriate picture of the particle structure of matter during their entire school career. The PROFILES module **"What happens to the ice cubes in my soft drink?"** opens up **"Ways into the (sub-)microscopic world"** for young students in grades 5 to 7. It was developed for school students who are just beginning to learn science (especially chemistry). This module shows them how to, through their own scientific inquiries, gain insights into scientific explanations and that apparently straightforward conclusions can often lead astray.

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Subject: Science and/or Chemistry

Grade level: 5th to 7th grade

Curriculum content: Properties of substances (density), states of matter

Kind of activity: Enquiring, explaining, laboratory work, building models, group activities etc.

Anticipated time: 4 lessons of 45 minutes for the example

Overall Objectives/Competencies: Explaining the make-up of substances by using a simple model of the particulate nature of matter.

Attached files		
1.	Student activities	Describes the scenario in more detail and the tasks the students should carry out
2.	Teaching guide	Suggests a teaching approach

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www.parsel.eu.