

PROFILES - Last newsletter (No. 6)

<http://stwww.weizmann.ac.il/g-chem/profiles/newsletter.html>

During the 2013-14 school-years we held the last PROFILES workshop. The finale was held in Berlin where teachers from all participant countries presented their modules and interesting topics.

Israeli teachers developed or adapted various new modules during this year, mostly related to Biology and Chemistry, e.g., "The color in nature", that deals with artificial food coloring; "Oil of live" which tries to answer whether olive oil is the best oil; "Breathing rolls" on fermentation, and another module that deals with dilemmas related to human organs trade. The modules were uploaded on the PROFILES Israel website for the use of all teachers who can integrate the modules in the curriculum as part of alternative assessment assignments.

Three teachers took part in the PROFILES conference that was held at the Free University of Berli.: Batya Lifshitz Goldreich, Adina Arbel and Sofia Leiderman. They presented posters, attended lectures on various topics in science teaching, participated in a Science-fair and met with other PROFILE teachers from other countries.



The following posters were presented by the three PROFILES teachers from Israel:

PROFILES impact, not only CPD!

From the CPD to the class, from the class to Chemistry competitions

Sofia Leyderman - Kfar Silver High-School and Ort Rogozin High-School, Kiryat-Gat • Advisors: Dvora Katchevich, Malka Yaron, Rachel Mankel-Nisman, Avi Hodstein • Institute: Weizmann Institute of Science, Department of Science Teaching, Israel

Hazard from above: Which sunscreen should we choose?

Sofia Leyderman, Boaz Hades and Irit Raina

- Opening scenario - students observe TV commercials regarding different types of sunscreens
- Brainstorming activity - students take various concepts regarding relevant sunscreens
- Web search - students gather information related to these concepts
- Presentation - students share the information collected in the Web search
- Summary - the teacher adds information, organizes and summarizes the knowledge gained
- Design and preparation - students design and prepare a sunscreen in teamwork
- Product market survey on sunscreen-associated information
- Decision Making - students decide which sunscreen they should use

Second prize in the competition "on inquiry" from the homogenizing time affects the stability of the cream!

Second prize in the competition "in the video category" (2012-2012)

Video on sunscreen
http://go.gip/5400

We investigate ice-cream

Sofia Leyderman and Edna Cohen

- Opening scenario - the class prepares ice cream by playing with a gelatin ball
- Brainstorming activity - students suggest questions related to ice cream
- Web search - students gather information related to ice cream
- Design and preparation - students make ice cream in minimal quantities in test tubes and suggest research questions on the subject
- Decision Making - students choose their favorite ice cream according to relevant criteria

First prize in the competition "on inquiry" (2012-2013) for cream influencing the melting rate of the ice cream!

First prize in the competition "on inquiry" (2012-2013)

Third place in the competition "on inquiry" (2012-2013)

The national competition for chemistry students "We've got chemistry!" (2013-2014)

Students' Reflection

"We chose this question because an experiment we did as part of chemistry lab and it interested us and we decided to explore it. During the work, we prepared ice cream with different fat percentages, we tasted, measured time, compared the ice cream that we prepared. We worked on the research for a long time, we prepared a poster, we printed, a presentation and a long lab report. We presented our work in the final round of the competition. This experiment was a little fun, with a lot of stress, but it was a great experience and a long lab report. We presented our work in the final round of the competition. This experiment was a little fun, with a lot of stress, but it was a great experience and a long lab report."

"At the closing ceremony of the final event we were very happy when they declared our winning; we got a reward and 100 in the chemistry lab participation award."

"The final competition was very significant and contributed a lot to us."

"The teamwork was fun. Our teachers, Viktoria Benzon and Edna Leyderman helped us a lot and guided us throughout the work, and accompanied us on the presentation of the project and event itself."

"Many friends were very part in the success of the project because of their support, interest and excitement. The principal, teachers, and students were very proud of us!"

Edible Chemistry: Food for Thought

Development & Implementation of two PROFILES modules in Israel

Dark, Milk or White – Which Tastes Better? **Oil of Life: Is Olive Oil the best oil?**

Teachers: Estela Libshitz-Goldreich – Non High School, Ramat Hashikma, Sharon District • Teachers: Arel Adina, Ronit Bondi, Hellen East, Rivlin – Shom High-School, Sharon, & Sander Alarone-Galoni – Netzer High-School, Netzer • Barco Weiss High School, Mazhar Belay • Advisors: Dvora Katchevich, Malka Yaron, Rachel Mankel-Nisman, Avi Hodstein • Institute: Weizmann Institute of Science, Department of Science Teaching, Israel

Have you ever thought about questions such as: How is chocolate made? What kind of chocolate is the best? One of us has been recognized for many years as healthy. It is often referred to as "Solid Gold" due to its nutritional value. In Israel, as in other countries, it is used also to produce cosmetics, natural medicine and to flavor our food. The module deals with questions such as: What do we really know about chocolate? Which criteria should be used to choose the best chocolate? The module focuses on the production process, kinds, composition, and other interesting facts.

Goals & Implementation

Dark milk or white	Oil of Life
<ul style="list-style-type: none"> Background and Educational Context Concepts to be learned Planning and conducting an activity Skills Estimation Material list Target audience 	<ul style="list-style-type: none"> Concepts to be learned Planning and conducting an activity Skills Estimation Material list Target audience

Contents of the Activities

Introduction: A video about the preparation of chocolate followed by a demonstration of the chocolate preparation in class.

Experiment Planning: The students choose one question regarding chocolate preparation and prepare it as a research question.

Expanding Our Knowledge: The students choose a topic regarding chocolate and find relevant information in the Web.

Presenting Our Knowledge: The students prepare a creative and interesting presentation in which they teach and share their acquired knowledge in chocolate with the class.

Conducting the Experiment: The students prepare their own chocolate according to their selected question.

Making Decisions: The Students perform Taste Tests and decide which is their favorite chocolate.

Final: A video about the production of chocolate and personal reflections.

Teacher's Reflection

"We really enjoyed developing the module. We learned a lot from this different stage and challenge we faced while developing the module and studying the module in all levels of students."

"We were happy to see that many teachers chose to implement this module in their classrooms and acknowledge for their work in developing a new way of teaching and learning."

"We would like to introduce more teachers to PROFILES modules, with the rest of the community of science teachers."