



JANUARY 2015



Dear Partners,

As discussed in Milan, QMUL in collaboration with Weizmann Institute and Sterrenlab is organising a 'TEMI practitioners workshop' for all those involved in the delivery of the TEMI training programme/workshops. The workshop will take place on April 22-23 in London at Queen Mary University.

These two days will be an opportunity to share how we are delivering the workshops in the nine countries involved in TEMI, exchange ideas, incorporate all the 4 TEMI teaching innovations and also work together on mysteries. The workshop aims to be very practical and creative.

We particularly extend the invite to all TEMI training partners' more junior staff and those who do not necessarily attend the large project meetings but are nevertheless involved in the delivery on the ground for the programme in our various countries. It will be a great opportunity to meet up and work together. The workshop will be held in English but those who are less fluent in English should not be discouraged to participate. Every effort will be made for everyone to have a pleasant and interesting workshop despite possible language barriers.

For further information, please don't hesitate to contact us!

Peter McOwan and Dorothee Loziak

WHAT'S COOKING?



TEMI at the ASE conference

The TEMI team at Sheffield Hallam University has been busy promoting TEMI at the Annual Association of Science Education (ASE) conference, held at the University of Reading. ASE is the largest subject association in the UK and its flagship event is the Annual Conference, held every January at a university in the UK. Participating teachers were very enthusiastic to hear about the TEMI innovations, particularly the wide range of mysteries that are being published on line. For the TEMI consortium the conference was a unique occasion to present the TEMI methodologies to a



TEMI Ireland and Norway working together

During the past few weeks, the TEMI team at HBV has been developing new mysteries, planning the next cohort and visited the TEMI team at the University of Limerick (UL). TEMI Norway was kindly asked to join UL's day one of their second cohort, and this was a very good experience for both teams. The two teams found many similarities - in the way they present TEMI and work with the 5E model - but also differences, that will be further discussed to learn from each other and improve the quality of the next cohorts. As a part of the visit to Ireland, TEMI Norway gave



TEMI in primary science teacher education

At the University of Bremen, TEMI activities have been implemented into pre-service secondary chemistry teacher training modules since October. 24 teachers-to-be tested the TEMI classroom activities and provided very positive feedback on the TEMI ideas and methodology. Currently, a selected set of TEMI examples are also used to enrich a chemistry course for prospective primary science student teachers. The new course will take place in February/March 2015. Selected lesson plans like the Magic Sand Mystery, The Color Changing Markers or the Chameleon Bubbles will

large audience of motivated and innovative science teachers.

This term, the next UK cohort will be drawn from the North East region of England. Working with one of the new Science Learning Partnerships, TEMI will be disseminated through Teaching Schools which are recognised as outstanding in science teaching and learning and their networks of schools.

In summer 2015, TEMI UK plans to establish a TEMI Lesson Study action research community to pilot more classroom based materials and find out how TEMI helps teachers to deliver changes to the new science curriculum.

a talk on the Norwegian educational system, and the following discussion turned out to be very interesting, regarding great changes in Irish curriculum being put into action quite soon. TEMI Norway is currently busy planning a Day 3 for cohort 2; day 3 is a dissemination seminar, in which teachers from Day 1 and 2, bring their colleagues, and practice using the 5E model and creating good mysteries. It will be an occasion to focus on showmanship, levels of enquiry and GRR. In December, a similar Day 3 for cohort 1 was organized, and the experience was very positive.

be presented and implemented during the laboratory practical experiences. So far 14 students registered for the course and TEMI Germany hopes that primary school teachers will appreciate the TEMI innovations as secondary school teachers did so far. If the attending teachers will become interested in how the mysteries can be incorporated in a science lesson, TEMI Germany will support them to learn how to develop their own mystery lesson plans for primary education too.



Light from stars

On 17th January 17th TEMI Italy met teachers and general public in Carpi (Northern Italy) in occasion of two representations of the theatre show “Luce dalle stelle” (Light from stars) developed and performed by the TEMI Italian group, Marina Carpineti, Marco Gilibefrti and Nicola Ludwig. <http://auditoriumsanrocco.it/2015/01/luce-dalle-stelle/>

The show was a great opportunity to present the project methodology and distribute mysteries cards and information materials about TEMI and IBSE to potential new TEMI teachers.

On January 28th, a TEMI cohort addressed to 13-17 pre-service secondary school teachers attending the TFA (Active Formative Training) courses stated in Milan. TEMI Italy decided to put particular emphasis on the showmanship innovation and theatre will be used as a practical example, also with the help of a professional stage director.

Reflecting together about the work done so far

On 6th January TEMI Israel welcomed Meriem from TRACES who spent 4 days at the Weizmann Institute and had a chance to join two workshops addressed to Israeli teachers. Despite the unfriendly weather, the visit of a member of TRACES, in charge of internal evaluation, helped TEMI Israel to reflect upon the work done so far and discuss the TEMI innovations with some of the teachers attending the workshop and who are contributing to improve the workshop structure. During the teacher training, the teachers had the opportunity to present the mysteries they had tested in their classroom. The lesson plans were either activities which were developed directly by TEMI Israel, by other TEMI partners, or developed from scratch by the teachers themselves. The Weizmann team presented two activities that were suggested by TEMI Austria and Norway, but adapted by the teachers to the Israeli needs. It was exciting to see that teachers are extremely interested in TEMI and this positive attitude will certainly affect how the TEMI lesson plans are implemented and ultimately the learning of their students. Several TEMI teachers supported by Weizmann presented mysteries at the science fair at the annual meeting of the chemistry teachers in Israel.

Developing new mysteries in Ireland

On 21st January TEMI Ireland ran its first workshop with the third cohort of teachers. This cohort comprised of 10 in-service science teachers, 5 male and 5 female, who ranged in teaching experience from 3-30 years. 3 of the pre-service science teachers who have been working on developing the TEMI mysteries in UL also attended and participated in the workshop. In addition to this, Julie and Kjetil from the Norway team travelled to Limerick to experience the Irish TEMI teacher training, in the hopes that we can learn from each other's practice. The Norway team took part in the workshop by presenting the participants with an example of a 5E lesson entitled 'Have you brushed your teeth?' which left everybody puzzled and experiencing that 'want-to-know' feeling.

The group worked well together, engaged in the workshop and came up with some excellent 5E lesson plans.



The importance of showmanship

TEMI Austria is happy to announce that full cohorts 2 and 3 were successfully delivered to Austrian teachers. On 19th January ten teachers participated in the second whole-day workshop held in Frastanz, Vorarlberg, and 19 teachers were involved on 20th January in Rum, Tyrol. The contribution of the magician Tilman Andris gave a special touch to the workshops; he started the day with a magic trick and the participants were asked to discover the similarities between the techniques of a magician and a teacher. Tilman continued his intervention with a non-verbal exercise on showmanship skills and teachers were asked to design the engage phase of a TEMI



TEMI and European teachers ambassadors

Sterrenlab in collaboration with QMUL is preparing to host a SCIENTIX event. It will take place at QMUL on April 24-26. On the first day, project managers or representatives of EU science education projects are invited to show their work on the production of classroom materials. On the second and third day, the event will be open to a group SCIENTIX ambassadors to which TEMI will be presented over a 5-hour programme. SCIENTIX Ambassadors are science teachers selected all across Europe to talk and promote European initiatives. It is therefore a great opportunity for TEMI to collaborate with SCIENTIX and disseminate their work further. Sterrenlab and QMUL will be in touch with partners to work on the TEMI part of



The full dimension of teaching at TEMI

Do you remember when children use to have oranges as gifts for Christmas? Well, not so long after this day of presents, in early January, TRACES was blessed with the scenery of whole orchards of orange trees and other citrus fruits in the lovely setting of the Weizmann Institute, and with the warm welcome of the team. On campus, anyone can pick a fruit or drink a freshly squeezed juice while playing with his family or discussing fundamental knowledge with colleagues studying all sorts of topics... This heavenly picture could not be tarnished by the unusual very stormy weather, which did not prevent many very brave and motivated teachers from coming to participate in

lesson plan using the showmanship skills. It was a great moment to provide feedbacks, ask questions and share best practises.

All teachers were extremely fascinated and motivated by the magic show and benefited from the ideas about showmanship for their presentation skills. A theatrical checklist from Andris will be posted on the TEMI website soon.

the event, which includes a presentation about TEMI material, an introduction to the TEMI methodology and workshops based on the TEMI lesson plans.

the workshops held on the 6th in Rehovot. Teachers from all ages, teaching in various grades and languages (some Hebrew, some Arabic) very willingly shared their enthusiasm for the TEMI approach, stressing for example the fun they were having and what it allowed: to show rather than to tell, to fully exploit the physical or emotional dimension of teaching. They were eager for more activities and more activities from other countries, and wanted to be able to test them as soon as they had learned about them through a quick online availability.

Read more feedback from Israeli teachers here (<https://www.dropbox.com/sh/qvv6rghcy01g91q/AABe7T23v5t8nosEXvinECh9a?dl=0>) and let us know about your own teachers feedback!



Seminary for in-service science teachers

TEMI Czech Republic had a very successful seminary for in-service science teachers made with the TEMI methodology in the past month.

Teachers were able to make their hands dirty with various interesting experiments.

One of these experiments was a complex murder mystery which the participants had to solve. The mystery consisted of a body, preparation of artificial blood, dactyloscopy, and isolation of DNA etc. to find the murderer. Teachers also found out how to make a microscope out of a smartphone with the use of a laser pointer and various other tasks.

Overall, everyone had a lot of fun learning science the TEMI way and the participants reported that this method will be very useful for their students.

Feedbacks needed!

Cnotinfor needs your feedbacks about the the TEMI App Teaching Mysteries! The application is being programmed in HTML 5, and it can run in any browser, and in Android, Windows and iOS smartphones and tablets as well.

You can have a look at the new design:

<http://teachingmysteries.eu/temiapp.html>

It should run fine in any browser, but, for the moment, runs better in Google Chrome.

It was decided not to implement scores, against the clock and the hall of fame. Once all bugs fixed it will be used on the web page, replacing the MoM and will be launched on the App stores for free download. The new coming MoM will be added to the App as they are produced.

Please give your feedback in the TEMI App thread at Basecamp.
