



**Report
Universe Awareness Docentendag**

Lorentz Center, Leiden, 28 Februari 2008



Background and Motivation

UNAWE has just held its 3rd multidisciplinary workshop bringing together active members of the international network and selected experts to focus on the materials, techniques and resources that the programme has developed thus far. For three days, participants from 16 different countries shared their ideas and experience with the latest in astronomy education and communication resources for very young children.

As a result of this workshop, UNAWE is set to develop the first prototype UNAWE materials and the training tools needed for educators to effectively transmit them.

UNAWE Netherlands

The fourth day of the workshop consisted of a one-day workshop for primary school teachers and curriculum coordinators from the Netherlands, to try out the materials and activities developed at the workshop. In the near future, UNAWE Netherlands will form part of the international network and the programme shall be made available through both informal and formal educational environments. UNAWE Netherlands will first be introduced into a small number of troubled urban neighbourhoods, areas that have been identified by Minister Vogelaar from the ministry of Integration.

Organization and Participation

The VTB program (<http://www.programmavtb.nl/>) and the Faculty of Science of Leiden University sponsored the event. VTB sent out an invitation to attend a daylong teachers training workshop (UNAWE Docentendag), to about 4000 schools all over the Netherlands.

The workshop took place during the spring holiday; therefore those educators that expressed interest in attending were intending to do so in their own free time. It should be noted that astronomy does not form any part of the national primary school curriculum. We assumed therefore, that any respondents would be educators with a genuine interest in Astronomy education and high personal motivation.

Reaction from the Network

The response was overwhelming. The registration process had to be temporarily halted until we could assess whether we could expand the original day as planned, to accommodate a larger number of teachers. With the support of the Faculty of Science of Leiden University and VTB, we were able to offer a full day of activities and teaching materials to take home to 60 teachers. There was not enough room for another 50 teachers who had expressed interest in attending.

Programme content

The teaching materials covered 5 key concepts that can be used to bring simple astronomy into the classroom. We began from the premise that we all know about the different seasons, and that eclipses occur, and how bright the Sun is – but when a very young child asks us “Why?” – we are often at a loss how to reply.



The themes featured were:

- Night and day
- The night sky- and the “multi-cultural moon”
- Lunar and Solar Eclipses
- The four seasons
- The structure of the Universe

Each theme included simple hands-on activities that were actually done in a classroom atmosphere and a ‘down to earth’ explanation of the phenomenon being demonstrated. Adaptation and creative ideas for further extension in the classroom were actively encouraged. The materials themselves were derived from multiple sources including UNAWE Venezuela, Colombia, India, and Tunisia.



Assistants from Leiden University



The absence of astronomy in primary schools, stems in part from the fact that many teachers lack basic astronomical understanding of the phenomena they would like to convey. We were lucky to secure the voluntary services of 10 Masters and PhD students from the Physics and Astronomy departments to assist us in this regard. These students were on hand for the entire day to answer all questions that arose, demonstrate the activities, and explain the astronomical concepts to the teachers.

Stichting RINO

To establish the tone that UNAWE activities aim for, we invited Jasper Woudenberg, and Chris Smiet of the Stichting RINO (<http://www.stichtingrino.nl/>) to start the day with a series of exciting and intriguing science experiments. RINO generally performs physics' experiments at secondary school venues, but for this occasion they designed a show that would appeal to younger children with an emphasis on astronomy.

'The Egg goes which way?' 'The Tortured Pickle', and 'Why is the Sunset Red?' all reinforced the principles that guide UNAWE: curiosity, imagination and fun. Stichting RINO was well received and has garnered a lot of ongoing interest from the participants.



International perspective

Dr. Ravishankar Arunachalam from India also assisted us during the teacher-training day. He demonstrated several of his activities using inexpensive, hand-made models of the earth, sun and moon. These activities were delivered in such a way that made them suitable for children but equally took into consideration the level of teacher understanding. As a result, the complex concepts and vast scale of astronomy seemed within the reach of anyone and everyone. Considering that astronomy is often regarded as an elitist science, this is a welcome achievement.

Resources

At the end of the day the teachers received a free copy of the CD-Rom 'Kids in Space', (<http://www.kidsinspace.nl/>) viewed a collection of astronomy activities and resources that have been developed by the International UNAWE network, and were made aware of other useful links to Dutch educational resources. They took with them the models they had made as well as a booklet of fun and effective activities, in Dutch, ready for use.

The day concluded at 5.30 as it had begun, with another potent and entertaining demonstration by the Stichting RINO and Leiden astronomer Leonie Snijders.

Feedback

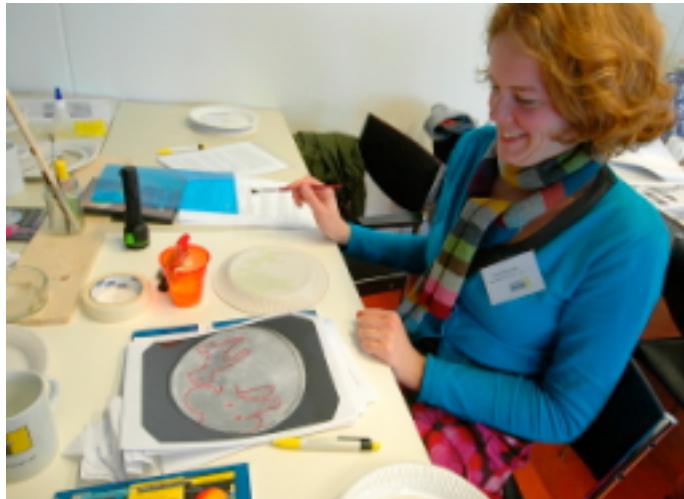
"Bedankt voor de inspirerende, boeiende en leuke workshopdag op het Lorentz center.

Ik vond het echt de moeite waard en hoop dat er in de toekomst vaker dagen worden georganiseerd!"

Heidi Marchal

"Ik kom net terug van de docentendag en wil je laten weten dat ik het geweldig vond. Goede informatie op een leuke, begrijpelijke manier gebracht. Vooral het enthousiasme van Sarah en de studenten. Ik heb weer veel stof tot nadenken. Ik ben blij dat ik aanwezig mocht zijn!"

Ella Hendriks



Op de schitterende Universe Awareness Docentendag (28 02 j.l.) moest ik helaas iets vroeger weg, zodat ik noch de gelegenheid heb gehad jullie er heel hartelijk voor te bedanken noch de kans om nader overleg te plegen met één van jullie.

Ik wil jullie bij deze nog mijn complimenten overbrengen, zowel voor de aangename toon als voor de veelzijdige inhoud. De rol van de assisterende medewerkers werd met brille gespeeld en was een goede vondst. Ook de verzorging van de consument in ons liet niets te wensen over.

Waar ik werkelijk even stil van was (niet vlug het geval!) is de effectiviteit van het lesmateriaal en de concrete aanvullende ideeën voor de uitwerking ervan

Siel van der Ree



Afgelopen donderdag was ik deelnemer aan de workshops docentendag. Jullie hebben er een hele leuke dag van gemaakt."

Ylonka Jesterhoudt.