

Detailed Programme

Tuesday, 18/Sep/2012

9:00am	Opening: Welcoming and Keynote Speech		
-	Location: (HS D)		
10:45am	Chair: Dirk Krüger		
	President of Freie Universität Berlin: Prof. Dr. Peter-André Alt Keynote speaker: Prof. Dr. Shaaron Ainsworth (University of Nottingham) Title: Multiple representations: Powerful tools for learning in biology		
11:15am	1.1 A Oral: Scientific Thinking	1.1 B Oral: Biology Education in Informal Settings	
-	Location: (HS D)	Location: (HS B)	
12:45pm	Chair: Marida Ergazaki	Chair: Michael Reiss	
	<i>Presentations</i>	<i>Presentations</i>	
	Competential Feedback Effects on Scientific Reasoning, Calibration, and Self-Efficacy Wollenschläger, Mareike; Möller, Jens; Harms, Ute	Do Zoo Visitors Need Zoology Knowledge to Understand Biodiversity Conservation? Dove, Tracy; Byrne, Jenny	
	Problem Solving in Biology: Assessing Competence Development Arnold, Julia; Kremer, Kerstin; Mayer, Jürgen	Learning at the Museum: Motivational Aspects of Guided Tours Härtling, Jennifer; Möller, Andrea; Pütz, Norbert	
	Age-Related Differences in Inquiry-Based Learning in Biology Class Kremer, Angelika; Schlüter, Kirsten	Beginning Biology – Interest and Inquiry in the Early Years Scheersoi, Annette; Tunnicliffe, Sue Dale	
2:15pm	1.2 A Poster: Session I	1.2 B Poster: Session I	1.2 C Poster: Session I
-	Location: (HS D)	Location: (HS B)	Chair: Andrea Möller
4:15pm	Chair: Holger Weitzel	Chair: Armin Lude	<i>Presentations</i>
	<i>Presentations</i>	<i>Presentations</i>	
	Animal Biodiversity in Ecosystems - the Consciousness of Pupils and Students Yli-Panula, Eija Inkeri	Fostering Scientific Modeling with Biological Worked-Out Examples Czeskleba, Anja; Schmiemann, Philipp	Learning Study in Upper Secondary School: What is the Relationship Between Genome and Individual Characteristics? Holmqvist Olander, Mona; Olander, Clas; Gross, Kerstin; Fagerjord, Elsa
	Promoting the Development of Students' Coherence of Biological Concepts Ummels, Micha; Kamp, Marcel; de Kroon, Hans; Boersma, Kerst	Experience-Based Teaching and Learning of Socioscientific Issues Chang Rundgren, Shu-Nu; Rundgren, Carl-Johan	Observation Competency Training in Guided Play Activities Kohlhauf, Lucia; Rutke, Ulrike; Neuhaus, Birgit
	A Pattern That Connects (Some) Students' Explanations for Species Evolution Zabel, Jörg; Gropengiesser, Harald	Embodied Metaphors and Analogies as Imaginative Thinking Tools Niebert, Kai; Treagust, David	The Application of Concept Maps in Teaching Invertebrate Zoology Stanisavljević, Jelena D.; Stanisavljević, Ljubiša Ž.

A Cognitive Model for Students' Purpose-Based Conceptions about Biological Adaptation
Weitzel, Holger

Primary School Pupil's Conceptions about the Respiratory Tract and Smoking Unhealthy Effects
Tracana, Rosa Branca; Viveiros, Sara; Carvalho, Graça S.

Enhancing Scientific Inquiry Learning and the Quality of Motivation - Evaluation of a Competence-Orientated Science-Course in Year 11
Stiller, Cornelia; Hahn, Stefan; Stockey, Andreas; Wilde, Matthias

Predictors of Academic Success: Achievement Motivation of Biology and Academic Self-Efficacy
Yilmaz, Mirac; Katircioğlu, Hikmet

Does Judgment Quality Affect the Attitude-Behaviour-Gap in Organ Donation?
Basten, Melanie; Wilde, Matthias

Development of Learners' Attitudes and Concepts at Transitions
Moormann, Alexandra

Undergraduate Biology Students' Ability to Read and Evaluate Research Articles
Ossevoort, Miriam; van Lacum, Edwin; Goedhart, Martin

The Natural History Perspective on Bio-Communities – A Narrative Approach
Jurgowiak, Martin; Zabel, Jörg

Metacognitive Knowledge as a Predictor for Communication Competence in Science
Klöpffel, Kathrin; Schwanewedel, Julia; Mayer, Jürgen

How Teenagers Justified their Swine Flu Vaccination Decision
Lundström, Mats; Ekborg, Margareta

The Emergence of Criteria for Evaluating Models in Science Classrooms
Acher, Andres; Kenyon, Lisa

Students' Perspectives on Leaves - Challenges in the Tree Identification Processes
Affeldt, Svenja; Stahl, Dennis; Groß, Jorge

Addressing the Ideas of Replication and Observer Bias to 5th Grade Students Conducting a Mealworm Experiment
Asshoff, Roman; Hilwerling, Ruth; Westphal, Philipp

Teeth Are Not Like Teeth: Students' Conceptions When Identifying Clams
Stahl, Dennis; Affeldt, Svenja; Groß, Jorge

Students' Conceptions about Sexuality and Ways to Clear their Doubts
Anastácio, Zélia Ferreira; Alves, Ana Luísa

Context-Contingent Influences on the Competency of Evaluation and Judgment
Werner, Melanie; Schwanewedel, Julia; Mayer, Jürgen

The Hidden Hand That Shapes Conceptual Understanding
Gropengiesser, Harald; Niebert, Kai; Riemeier, Tanja

Analyzing Students' Argumentations in Reasoning about Processes of Adaptation
Basel, Nicolai; Prechtel, Helmut; Harms, Ute

Natures of Science: A Case Study of Biodiversity Conservation
van Dijk, Esther M.

Learning Biology by Living it - Regulation of Tenseness
Bergentoft, Heléne; Holmqvist, Mona

Inclusive Science: Teachers' Attitudes and Practices
Costa, António; Ferreira, Maria Eduarda; Reis, Carlos Sousa; Salgado, José Miguel

Using Concept Maps to Foster Students' Socioscientific Reasoning and Decision Making
Nitsch, Anne; Eggert, Sabina; Bögeholz, Susanne

Eco-School Effectiveness: A Matter of Values?
Boeve-de Pauw, Jelle; Van Petegem, Peter

Content Choices within a Concept-Context Approach in Primary Science Education
Lammers, Annelotte; Keijzer, Ronald; van Graft, Marja

Comparative Study in Biology Lessons Between Germany and China
Liu, Ning; Neuhaus, Birgit

4:45pm
-
6:30pm

1.3 A Oral: Student Conceptions

Location: (HS D)
Chair: **Harald Gropengiesser**
Presentations

Activating a Productive Epistemological Modus – Effects of Reflecting Intuitive Ideas

Oschatz, Kerstin

Effects of Experiments for Pupil's Understanding of Plant Nutrition

Steigert, Tanja; Schrenk, Marcus

Explaining Transfer: Why Students have Difficulties Recontextualising Cellular Respiration

Wierdsma, Menno; Knippels, Marie-Christine; van Oers, Bert; Boersma, Kerst

1.3 B Oral: Teaching Socio-Scientific Issues

Location: (HS B)
Chair: **Margareta Ekborg**
Presentations

Reasoning Patterns in Processing Multi-Criteria Socio-Scientific Decision-Making Situations

Papadouris, Nicos; Ioannou, Ero

Students Understanding of the Logics of the Media about Socioscientific Issue

Molinatti, Grégoire; Simonneaux, Laurence

Arguments, Values & Beliefs of Pre-Service Teachers Discussing Socio-Scientific Issues

Castells, Marina; Konstantinidou, Katerina

Wednesday, 19/Sep/2012

9:00am
-
11:00am

2.1 A Symposium: Supporting Students' Interactions with Socio-Scientific Issues

Location: (HS D)
Chair: **Beverly France**
Presentations

Supporting Students' Interactions with Socio-Scientific Issues

France, Beverly; Birdsall, Sally; Levinson, Ralph; Morin, Olivier; Simonneaux, Laurence; Simonneaux, Jean

Digital Technology to Support Student's Socio-Scientific Reasoning about Environmental Issues

Morin, Olivier; Simonneaux, Laurence; Simonneaux, Jean

Promoting Constructive Discourse in Philosophical Issues through an Online Forum

Levinson, Ralph

Changing Attitudes to Animal Research: Introducing the Scientists' Perspective

France, Beverly; Birdsall, Sally

2.1 B Oral: Student Conceptions

Location: (HS B)
Chair: **Kerst Thomas Boersma**
Presentations

Molecular Mechanistic Reasoning: an Educational Strategy to Bridge the Gap Between the Molecular and Cellular Level.

van Mil, Marc H.W.; Postma, Paulien A.; Boerwinkel, Dirk Jan; Waarlo, Arend Jan

The Interpretation of Students' Lamarckian Explanations

Boersma, Kerst Thomas; Geraedts, Caspar

The Role of Conceptions and Metaphors in Students' Understanding of Seeing

Dannemann, Sarah; Krüger, Dirk

The Effect of Teaching on Children's Ideas about Plants' Protection

Petrou, Stella; Korfiatis, Konstantinos

A Pedagogy to Support Understanding of Sustainability in 5-Year-Old Children

Birdsall, Sally

11:30am - 12:30pm **2.2 A Oral: Health Education**

Location: (HS D)

Chair: **Kirsten Schlüter**

Presentations

2.2 B Oral: Models and Modeling

Location: (HS B)

Chair: **Annette Upmeier zu Belzen**

Presentations

A Hands-On Activity to Promote Healthy Sun Exposure Behaviours

Fonseca, Maria João; Costa, Patrício; Lencastre, Leonor; Tavares, Fernando

Students' Conceptions of Models and Modelling

Trier, Ulrike; Upmeier zu Belzen, Annette

Comparative Analysis of Food and Nutrients in Textbooks of 16 Countries

Carvalho, Graça S.; Ferreira, Claudia; Gonçalves, Artur; Tracana, Rosa Branca

How 7th to 10th Graders Categorize Biological Models

Krell, Moritz; Krüger, Dirk

2:00pm - 4:00pm **2.3 A: Business Meeting**

Location: (HS D)

Chair: **Margareta Ekborg**

Thursday, 20/Sep/2012

9:00am - 10:30am **3.1 A Oral: Environmental Education**

Location: (HS D)

Chair: **Tali Tal**

Presentations

3.1 B Oral: Argumentation/Teacher Education

Location: (HS B)

Chair: **Grégoire Molinatti**

Presentations

New Biology Curriculum: National Results of an Educational Intervention

Hadjichambis, Andreas Ch.; Mappouras, Demetrios G.; Manoli, Constantinos C.; Johnson, Bruce

Teaching Scientific Argumentation to Pre-University Students Using Primary Literature

Koeneman, Marcel; Goedhart, Martin; Ossevoort, Miriam

The Place of Higher Education in Promoting Socio-Environmental Responsibility among Future Citizens and Professionals

Tal, Tali; Kaplan, Keren

Students Study Background and Supporting Reasons in Arguing Socio-Scientific Issues

Christenson, Nina; Chang Rundgren, Shu-Nu

Group Behavior and Individual Roles of Undergraduate Students during an Environmental Education Course

Chance and Determinism in Evolution: Teachers' Conceptions in 21 Countries

Clément, Pierre

**Christodoulou, Anthie;
Christodoulou, Maria;
Paraskeva-Hadjichambi,
Demetra; Korfiatis,
Konstantinos**

**11:00am
-
12:30pm**

3.2 A Oral: Health Education
Location: (HS D)
Chair: **Graça S. Carvalho**
Presentations

Conceptualizations of Health and
Welfare among Elementary
School Students in the Negev's
Bedouin Arab Community
**Ben Zvi Assaraf, Orit; Sedawi,
Wisam; Cwikel, Julie G.**

Health as a Crossroad of Socio-
Scientific Issues and Critical
Reading
**Domènech Calvet, Ana Maria;
Márquez Bargalló, Conxita;
Roca Tort, Montserrat**

Discovering Environment and
Sustainability with Mobile Devices
– Concepts and Potentials
**Bleck, Sebastian; Bullinger,
Marcel; Lude, Armin; Schaal,
Steffen**

**3.2 B Oral: Publication in
International Journals**
Location: (HS B)
Chair: **Michael Reiss**
Presentations

**David Slingsby, Michael Reiss,
Tali Tal, Anat Yarden**

**2:00pm
-
4:00pm**

3.3 A Poster: Session II
Location: (HS D)
Chair: **Philipp Schmiemann**
Presentations

Visualization of Insects in the
Early Years
**Bartoszeck, Amauri Betini;
Tunnicliffe, Sue Dale**

Support for and Barriers to
Animal Welfare Education
**Vidal, Michel; Simonneaux,
Laurence**

Rivers: Something More than
Just Streams of Water that Arise
in the Mountains and Flow into
the Sea.
Gil-Quílez, Maria José;

3.3 B Poster: Session II
Location: (HS B)
Chair: **Jörg Zabel**
Presentations

Teacher Trainees' Trials and
Tribulations with IBSE
**Krämer, Philipp; Nessler,
Stefan; Schlüter, Kirsten**

Students' Interest in Plants:
Development of a Teaching Unit
Neumann, Sara

Biotechnology in the Greek
Secondary Biology Books
Kalaitzidaki, Marianna

From Genes to Traits without
Molecules; Genetics in
Prevocational Education.
Wolter, Horst

3.3 C Poster: Session II
Chair: **Doris Elster**
Presentations

Reframing Classroom
Discourses on Genetic Testing
from an STS Perspective
**Boerwinkel, Dirk Jan; Waarlo,
Arend Jan; Swierstra, Tsjalling**

Development of Critiquing
Practices in Inquiry-Oriented
Programs in Biology
Bielik, Tom; Yarden, Anat

High-School Teachers'
Appropriation of an Innovative
Curriculum in Bioinformatics
**Machluf, Yossy; Gelbart,
Hadas; Yarden, Anat**

Martínez_Peña, Begoña

Assessing the Development of Students' Ecological Conceptual Understanding

Korsager, Majken

Learning the Energy Concept in Biological Contexts at Primary Level

Opitz, Sebastian; Neumann, Knut; Harms, Ute

Development and Optimization of a Testing Instrument for Recording the Nature of Science (NOS) Views of Students

Koska, Johannes; Krüger, Dirk

Cell, Organ, Organism – Only a Structural Hierarchy?

Lutze, Michaela; Zabel, Jörg

Learners' Conceptions about Plant Physiology - An Intervention Study with Students

Walter, Bettina; Schrenk, Marcus

Conditions of Students' Motivation to Learn Plant Physiology in a Virtual Environment

Jancarz-Łanczkowska, Beata Barbara; Potyrala, Katarzyna Ewa

Motivation toward Mastery for Gifted Students in Socio-Scientific Issues

Knutsen, Bård

Student's Conceptions of Plant Nutrition – an Intervention Study at Primary School

Schrenk, Marcus; Vocilka, Anja

When Students and Teachers Deal with the Classification of Animals

Orange Ravachol, Denise

Analysis of the Concept of Biodiversity Present in Textbooks

Miani, Camila Sanches; Brando, Fernanda da Rocha; Caldeira, Ana Maria de Andrade

Utilization and Impact of Conservation Messages in Informal Learning Settings

Kögler, Julia; Hellwig, Hauke; Hartmann, Stefan

Students' Motivation to Engage in Student-Scientist-Partnerships

Heidinger, Christine; Höll, Martina; Radits, Franz; Scheuch, Martin

Exploring Children's Views of What's inside their Bodies

Andersson, Johanna; Tibell, Lena; Löfgren, Ragnhild

Learning Trajectories about the Nature of Science in Student-Scientist Partnerships

Bardy-Durchhalter, Manfred; Radits, Franz

Assessing Pre-Service Teachers' Professional Knowledge in Biology: The Project KiL

Großschedl, Jörg; Glowinski, Ingrid

Peers' Discursive Activity about Predation in a Computer-Supported Learning Environment

Ergazaki, Marida; Zogza, Vassiliki

Mapping Controversies about the Use of Pesticides and Agronomy Teaching.

Cancian, Nadia

The Difficulties Prospective Biology Teachers Face during the Rubric Development

Güneş, Perihan; Alaş, Ali

Determination and Fostering of Students' Model Competence Using Hands-On Tasks

Hänsch, Juliane; Upmeier zu Belzen, Annette

Processes of Scientific Inquiry in Theory and Practice

Nowak, Kathrin Helena; Nehring, Andreas; Tiemann, Rüdiger

Sharing Experiences of Two LearningLABs on Bioinformatics for European Teachers

Wood, Louisa; Gebhardt, Philipp

The Potential of Biology Textbooks to Integrate Molecular Genetic Knowledge

de Ruijter, Chantal; Boerwinkel, Dirk-Jan

Conceptual Reconstruction and Role of Metaphors in Understanding Germ Theory

Unger, Barnd

Comparative Analysis of the Activity of Two Teachers in Terms of Students' Acculturation to Science

Lhoste, Yann; Schneeberger, Patricia; Peterfalvi, Brigitte

4:30pm
-
6:30pm

3.4 A Symposium: Teaching Evolution: Cognitive and Affective Factors

Location: (HS D)

Chair: **Marcus Hammann**

Presentations

Teaching Evolution: Cognitive and Affective Factors

Hammann, Marcus; Konnemann, Christiane; Olander, Clas; Papadopoulou, Penelope

Why Am I Learning Biological Evolution?

Olander, Clas Ludvig

Conceptual Ecology of the Evolutionary Theory in the Greek Cultural Frame: Students' Conceptual Ecologies Before and After Teaching.

Papadopoulou, Penelope; Katakos, Efstratios; Athanasiou, Kyriacos

Attitudes towards Evolutionary Theory: A Multidimensional Approach

Konnemann, Christiane; Asshoff, Roman; Hammann, Marcus

Acceptance of Evolutionary Theory: Do Problem Concepts and Different Aspects of Evolution Make a Difference?

Hammann, Marcus; Konnemann, Christiane; Asshoff, Roman

3.4 B Oral: Pedagogical Content Knowledge

Location: (HS B)

Chair: **Anat Yarden**

Presentations

Evaluation and Validation of Testinstruments to Measure Biology Teachers' PCK&CK

Juettner, Melanie; Neuhaus, Birgit Jana

Characterizing Tacit PCK of in-Service Biology Teachers

Rozenszajn, Ronit; Yarden, Anat

Teachers' PCK Development During a Professional Development Course in Ecology

Scheuch, Martin; Heidinger, Christine; Keller, Erika; Radits, Franz

Biology Teachers Learning to Design Context-Based Lessons

Wieringa, Nienke; Janssen, Fred; De Hullu, Els; Van Driel, Jan

Friday, 21/Sep/2012

9:00am
-
10:30am

4.1 A Oral: Teaching Strategies

Location: (HS D)

Chair: **Maria José Gil-Quílez**

Presentations

4.1 B Oral: Teaching Genetics

Location: (HS B)

Chair: **Dirk Jan Boerwinkel**

Presentations

	<p>Teachers' Objectives and Knowledge Focus in Outdoor Teaching, Grade 4-6 <u>Wilhelmsson, Birgitta; Ottander, Christina; Lidestav, Gun</u></p>	<p>Instructional Efficiency of Tutoring Hands-on Phases in an Outreach Lab <u>Scharfenberg, Franz-Josef; Bogner, Franz X.</u></p>
	<p>From Matter Cycle to Ecosystem: a Learning Progression Proposal <u>Novella, Eva; Marbà-Tallada, Anna</u></p>	<p>Teachers Talk in the Classroom: Connecting Genes with Traits <u>Thörne, Karin Helena; Gericke, Niklas; Hagberg, Mariana</u></p>
	<p>The Connection Between Secondary School Students' Internal Factors, School Experiences and Sustainability Actions <u>Uitto, Anna; Saloranta, Seppo</u></p>	<p>Training Teachers to Use Bioinformatics Resources in Developing Student Assignments <u>Sminia, Hienke</u></p>
<p>11:00am - 12:30pm</p>	<p>4.2 A Oral: Interest and Motivation Location: (HS D) Chair: Marie-Christine Knippels <i>Presentations</i></p>	<p>4.2 B Oral: Teaching Strategies Location: (HS B) Chair: Patricia Schneeberger <i>Presentations</i></p>
	<p>First-Year Students' Priorities and Choices Related to Science and Technology Education <u>Elster, Doris; Mauk, Verena</u></p>	<p>From Lectures to Small-Group Learning in an Undergraduate Biology Course <u>Tsaushu, Masha; Tal, Tali</u></p>
	<p>Interest Development in Biology through Learning Progression <u>Petersen, Morten Rask</u></p>	<p>Science Standards and Individualised Teaching – A Contradiction? <u>Venus-Wagner, Iris</u></p>
	<p>Bilingual Biology Teaching: Students' Attitude Depending on Motivation and Achievement <u>Duske, Petra; Drixler, Julia; Ewig, Michael</u></p>	<p>Good Student Questions in Inquiry Learning? <u>Lombard, François E.; Schneider, Daniel K.</u></p>