Date	AM All morning sessions are single-strand.	PM All afternoon sessions are parallel-strand.	Evening
Monday 11 Sept 06		**14.30 Onwards - Registration Level 9**	**18.30 Welcome Reception and Buffet - Jeffery Hall**
Tuesday 12 Sept 06	**9:00 - Opening remarks - Michael Reiss - Jeffery Hall** **9:05 - 9.25 Keynote Address - Fotis Kafatos, Imperial College London** *Teaching and research in Biology in an era of unification* **9:30 - 11:00 - Paper Session I Jeffery Hall** **Strand 4 Student reasoning, scientific thinking and argumentation** John K Gilbert, Bev France *A model for communication about biotechnology* Vaille Dawson *Argumentation about biotechnology with Western Australian high school students* Marida Ergazaki & Vassiliki Zogza *Exploring options for increasing the equilibrium size of a fish population in a lake: Peers' discursive activity towards the concept of carrying capacity within a computer-supported learning environment* **11:00 -11:30 Coffee Break** **11:30 -13: 00 Paper Session II Jeffery Hall** **Strand 1 Student Conceptions and Conceptual Change** Kattmann, Ulrich *Learning Biology by means of anthropomorphic conceptions?* Zabel, Jörg *Stories about evolution: The role of narrative in Understanding* Anita Wallin *One year after teaching – How consistent are students in using the scientific theory of biological evolution by natural selection?*	**14:00 - 15:00 Poster Session Ia (10) Room 901** **Strand 4 Student reasoning, scientific thinking and argumentation** Teixeira, Francimar Martins *Argumentation in Science Class for Brazilian Children: A Case Study* Grady Venville and Jenny Donovan *How Students from Year 2 to Year 12 Use a Model for Abstract Concepts in Genetics* Martin Braund, Fred Lubben, Zena Scholtz, Melanie Sadeck & Merle Hodges *Developing argumentation in grade 10 biology lessons in South Africa: implications for teachers' professional development* Riemeier, Tanja *Students' argumentation and conceptual development on blood circulation* Du Plessis, L and Anderson, T R *Development of a module of the process of interpretation of arrow Symbolism in biology diagrams* Meisert, Anke *Working with models and its effects on students' conception on models' epistemology* Konrad J Schönborn, & Trevor R Anderson *Measuring the factors influencing students' interpretation of external representations in biochemistry: a qualitative approach,* Mariana Guelero do Valle & Marcelo Tadeu Motokane *Argumentative structure in students' written production* Sabine Mogge, Helmut Vogt, Bernd Wollring *Scientific Thinking – Modelling Processes of Primary Level Students Regarding Special Natural Science Problems* Alame Adrianna Gomez Galindo and Neus Sanmarti Puig *Process of transformation of everyday langauge into scientific language in primary school children*	**19:30 Boat Trip**

		14:00 - 15:00 Poster Session Ib (10) **Room 903** **Strand 1 Student Conceptions and Conceptual Change** Show-Yu Lin, Chih-Ming Tu, & Yeong-Jing Cheng *Genetic concept learning of 7th grade students assessed by Concept Diagnostic Inventory-Biology* Gericke, Niklas *Two aspects of learning difficulties in genetics,* Berg, Helene Breiteig *Experience of relevant knowledge and understanding in genetics when facing genetics related socio-scientific issues* Jorge Gross & Harald Gropengiesser *Uniqueness and Variation: The Unexpected Outcomes of Free-choice Learning,* Denise Azevedo & Edson Pereira da Silva *Pupils talk movies: analysis of discourses about evolution* Leonardo Gonzalez Galli & Elsa Meinardi *Obstacles in the learning of natural selection* Athanasiou Kyriacos, Papadopoulou Penelope & Sariggelis Michalis *Views on Evolution and natural selection expressed by high school and university students* Carolyn Boulter, Sue Dale Tunnicliffe, Professor Michael Reiss *Ponds as Natural Habitats: How children express their understandings and the relevance for teaching biology* Daniela Marchetti, Anna Perazzone, Laura Colucci-Gray, Giuseppe Barbiero, Ilenia Grandi, Elena Camino *The conceptual tool „boundary" and its application to the different levels of biological hierarchical systems* Lucia Prinou, Lia Halkia, Constantine Skordoulis *How Primary School Teachers understand Adaptations and relevant Biological Concepts* **Please remove posters by 16.00 today.** **15:00 - 15:30 Afternoon Tea** **15:30 - 17:00 Paper Session IIIa** **Room 901**	

		Strand 1 Student Conceptions and Conceptual Change Kostas Kampourakis, Vasso Zogza *Students' preconceptions about evolution: a study of explanatory coherence* Patrícia Jelemenská, Ulrich Kattmann *Understanding the units of nature: From reification to reflection. A contribution to Educational Reconstruction in the field of ecology* **Strand 3 Student Values, attitudes and decision-making** Birgit Neuhaus, Angela Sandmann & Wen-Hua Chang *Students' attitude towards science and the nature of science – A comparison between Taiwanese and German students* **15:30 - 17:00 Paper Session IIIb Room 903** **Strand 7 Health Education and Biology Education** Zélia Anastacio, Graça S Carvalho and Pierre Clement *Portuguese Primary School Teachers' Conceptions and Obstacles to Teach Sex Education* Papadopoulou Penelope, ***Kartsoglou*** Anna and Professor Athanasiou Kyriacos *Biology and health education: Is reproductive biology a real chance for sex education?* Gillian Kidman *Biotechnology Education: Topics of interest to students an teachers* **17:00 - 18:00 Poster Session IIa Room 901** **Strand 1 Student Conceptions and Conceptual Change** Abolaji Mayowa Akinyele and Oyedele Job Segun *The Conservation Club Effect': An impact Assessment of biodiversity conservation awareness in some selected Nigerian Secondary Schools* Bandiera, Milena *Science education versus science culture: some worrying indications from questionnaires for admission to university Biology courses of studies*	

		Bartoszeck, Amauri Betini *The development of the concept of skeletons in Brazilian students* Detlef Urhahne, Stefanie Graf, & Monika Aufleger *Changes of Epistemological Beliefs after a Teaching Unit with Student Experiments on Plant Germination and Growth* Ulrike Rutke & Ute Harms *Students' conceptions about the origin and development of their own life – a study in the first year of the elementary school* Madeleine Bengtsson, Mats Hagman & Lena Skärby *What about knowledge of names of animal and plant species among young students after 12 years in school? – an internet based study* Heike Brauer & Anke Meisert *Cumulative learning by comparing concept-analogue phenomena* Byrne, Jenny *What are micro-organisms and what do they do? A study of primary school aged pupils' ideas about micro-organisms* Cypionka, Regina *Children's ideas about plants as living beings and their ontogenetic and phylogenetic development* **17:00 - 18:00 Poster Session IIb Room 903** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Helmut Prechtl & Horst Bayrhuber *Biologie im Kontext (bik) – BMBF program to promote students' competencies in context-based biology education and to support teachers' professional development* Lücken, Markus *Overview of the evaluation concept of the German project „Biologie im Kontext" and preliminary results* Elster, Doris *Teachers' Voices in Learning Communities – First Results of the Qualitative Evaluation within the Project Biology in Context* Philipp Schmiemann, Martin Linsner, Birgit Neuhaus & Angela Sandmann *Development of a competency model to differentiate between various levels of biological knowledge*	

		Andrea MÖLLER, Christiane R. GRUBE & Jürgen MAYER *Inquiry Competence in German Biology Education: First Results of the National Research Project "biology in context" (bik),* Claudia Nerdel, Gesa Schoormans & Helmut Prechtl *Theoretical conceptions and empirical validation of a model of competency structure for subject related communication in biology education* Sabina Eggert & Susanne Bögeholz *Fostering pupils' decision making competence in the context of sustainable development* Mittelsten Scheid, Nicola *Measuring students' competence of moral judgement with regard to bioethical issues* Lewis, Jenny *Science Education and Biology Education: starting to define the difference through a consideration of the concept of 'learning demand'* Ola Magntorn & Gustav Helldén *From Shrimp to River understanding*	
Wednesday 13 Sept 06	**9:00 - 11:00 Paper Session IV** **Jeffery Hall** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Rene H V Westra *The development of the concept écosystem' according to the concept-activity-context approach for biology education* Clas Olander *Design and validation of a teaching sequence for compulsory school about biological evolution – pupils' experiences and development of knowledge* Rosemary Hipkins *Formative assessment of primary school children's systems thinking* Corina Gonazlez Weil and Ute Harms *The analysis of learning processes in cell biology by collaborative concept maps* **11:00 - 11:30 Coffee Break** **11:30 - 13: 00 Paper Session V**	**14:00 - 15:00 Paper Session VIa** **Room 901** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Paul Jatzwauk & Angela Sandmann *Structures of Lessons and Use of Tasks in Grammar School Biology Education* Angela Krombaß *Cognitive and motivational effects of a computer-based information system on the topic of biodiversity supplementing the exhibits of a natural history museum* **14:00 - 15:00 Paper Session VIb** **Room 903** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Matthias Wilde, Detlef Urhahne *Motivational and cognitive consequences of learning in a natural history museum with differently structured tasks* Michael Germ & Ute Harms *How do biology tests look like in German grammar schools? A descriptive study on task formats and*	Free Evening

	Jeffery Hall **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** David Slingsby & Michael J. Reiss *Assessing a new advanced level biology course for 16-19 year-olds* Julia Wadouh, Birgit Neuhaus & Angela Sandmann *Cumulative Learning and Inner Subject Linkage in Biology Education* Gustav Hellden, Constantine Aivazidis & Maria Lazaridou *The advantage of computer assisted instruction in environmental education at secondary level*	*teachers' intentions for raising different cognitive dimensions* **15:00 Bookable Visits** **Please remove posters by 16.00 today.**	
Thursday 14 Sept 06	**9:00 - 11:00 Paper Session VII** **Jeffery Hall** **Strand 3 Student Values, attitudes and decision-making** Marcus Grace *Developing high quality decision-making discussions about biological conservation in a normal classroom setting* Marta Federico-Agraso & María Pilar Jiménez-Aleixandre *Therapeutic cloning? Discourse genres, ethical issues and students' perceptions* Margareta Ekborg *Opinion building in a social-scientific issue: the case of genetically modified plants* **Strand 1 Student Conceptions and Conceptual Change** Maike Ehmer & Marcus Hammann *Student conceptions about the method of scientific experimentation* **11:00 - 11:30 Coffee Break** **11:30 - 13: 00 Paper Session VIII** **Jeffery Hall** **Strand 2: Student Interest and Motivation** Bev France, Catherine Buntting Choosing biotechnology: A	**14:00 - 15:30 Poster Session IVa** **Room 901** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Rifat Efe & Hulya Aslan Efe *Using student group leaders in co-operative learning methods in biology classrooms* Saïda AROUA, Maryline Coquide, Salem Abbes *A didactic strategy for teaching biological evolution in Tunisia: epistemological reflections and argumentations* Magali Fuchs Gallezot, Maryline Coquide *Genetics, genomics and post-genomics: educational challenges and how the French curriculum related to life sciences teaching deals with these fields?* Miriam Ossevoort, Martin Goedhart *Active collaborative knowledge construction by first-year biology students using an electronic discussion board* Angelika Kremer, Mark Walker, Kirsten Schlüter *Can prospective teachers' views of science and science teaching be altered? A study looking at the effects of a training course in inquiry-based science* Cohen, Rahel *Teaching the living cell topic as a*	Conference Dinner

	narrative exploration of significant educational episodes influencing career choices in biotechnology Ayelet Baram-Tsabari,Anat Yarden Interest in biology: A developmental shift characterized using self-generated questions Anja Schmitz, Claudia Nerdel A Study of the Development of Interest and Knowledge among Students using the Project NaT-Working Meeresforschung (Oceanography) as Example	*longitudinal axis in junior-high schools: examining experienced teachers' PCK* Downs, Colleen T *Moving away from a lecture-mode to a tutorial-skills based mode: experiences of a 1st year Biology course on two campuses at the University of KwaZulu-Natal, South Africa* Donovan, Jenny and Vaille Dawson *Factors influencing the use of information communication technology (ICT) by early career science teachers* Michael Ewig & Karen Drews *Time spent of reproducing, restructuring and transferring knowledge – a comparison of students instructed bilingually and in German only* Van Dijk, Esther M *Educational Reconstruction of Evolution for Teacher Education* Agustín Adúriz-Bravo, Leonardo González Galli, Lorena Inzillo, Valeria Litterio, Elsa Meinardi, Rosana Valli, Andrea Revel Chion, María Inés Rodríguez Vida & Javier Simón *Learning about the nature of biology in secondary classes: Rationale and proposals* Sandie Bernard, Graça S Carvalho & Pierre Clement *The French teaching of human reproduction and sexuality in secondary schools since 1950* Carrió M, Albaina S, Andion, O Larramona, P Calafell, F Baños & J-E Perez. *Assessment of the biology learning by PBL method in undergraduate students: comparison study between traditional method and PBL* **14:00 - 15:30 Poster Session IVa** **Room 903** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Constantine Aivazidis, Harvey Mellar & Ralph Levinson *An investigation into the use of identification keys in the training of biology students* Dorita Demetriou, Konstantinos Korfiatis, Michael Michael & Constantinos Constantinou *Evaluation of an e-curriculum for supporting field studies, an enhancing*	

		classification skills and conceptual understanding in elementary education's ecology Hagit Yarden & Anat Yarden *Supporting learning biotechnological methods using interactive and task oriented animations* Korfiatis Konstantinos & Hovardas Tasos *Provoking conceptual change in an ecology university course, using interactive computer models* Ángel D López y Mota & Diana Patricia Rodríguez Pineda *Relationships between science and learning teachers' conceptions with teaching: an exploratory study of biology in secondary schools* Anna Marba Tallada & Conxita Marquez Bargallo *Learning to read biology (and reading to learn biology* Sonja M Mork, Øystein Sørborg and Wenche Erlien. *Pedagogical use of ICT – the example of gene technology* Quílez, Marie José Gil *Ecology: what ecology?* Retzlaff-Fürst, Carolin *The influence of methods of scientific inquiry on the development of subjective value complexes among pupils of 10th grade – an intervention study* Schaal S, Bogner F X, Girwidz R. & Rubitzko T *Media Assisted Learning in Science Education: An interdisciplinary approach to hibernation* Lida Schoen, Declan Kennedy *Science across the world in teacher training* Sabine Waßenhoven & Dirk Krüger *Biology teachers' metaphors of learning and teaching,* Alexandre de Sá Friere, Márcia Cristina Fernandes Xavier e Milton Ozório Moraes *A game in Genetics as a meaningful instrument for New Biology teaching* Colleen Aldous & Annemarie Hattingh *The effect of group work on fourth year genetic students´ problem-solving ability* Dempster, Edith *Subject matter knowledge for Biology student-teachers: how much and who should teach it?*	

		Please remove posters by 16.00 today. **15:30 - 16:00 Afternoon Tea** **16:00 - 17:00 Paper Session IXa Room 901** **Strand 3 Student Values, attitudes and decision-making** Christiana Th. Nicolaou, Kostantinos Korfiatis, Maria Evagorou, and Constantinos P Constantinou *The development of decision-making skills and environmental concern using interactive models* Jérémy Castera, Catherine Bruguiere, Pierre Clement Lirdhist *The genetic diseases in the French biology school textbooks (for 15-18 years old students): what kinds of genetic determinism?* **16:00 - 17:00 Paper Session IXb Room 903** **Strand 1 Student Conceptions and Conceptual Change** Sue Dale Tunnicliffe & Michael J Reiss *Drawing breath: the use of drawings and interviews in a six-year longitudinal study of 5-11 year-olds' understandings of what is inside themselves* Eva West *Pupils' (Age 10-12) Conceptions of hearing before teaching* **16:00 - 17:00 Workshop on CmapTools, Room 915** Mauri Ahlberg *CmapTools and NatureGate® as practical tools to monitor and promote biological learning and biology education and research on them* **17:00 - 18:00 Poster Session IVa Room 901** **Strand 6/7 Environmental Education/ Health Education, and Biology Education** Oskarsdottir, Gunnhildur *The development of children's ideas about the body in the primary school classroom* Tuncer, Gaye	

		Education for Sustainability": a combining actor Tekkaya, Ceren *An Attempt for improving Environmental Education in Elementary teacher* Susanne Menzel (Will not be attending) & Susanne Bögeholz *Differences in the Perception of Biodiversity Loss and Stated Behaviour to Protect Biodiversity – A Survey with 11th-Grade-Students in Chile and Germany* Hauke Hellwig & Annette Upmeier zu Belzen *Teachers' concepts in biology classes between environmental education and education for sustainable development* Kuracina, Daniel *Cluster analysis of primary schools pupils' attitude to environmental reality* Rosa Branca Tracana, Maria Eduarda Ferreira & Graça S Carvalho *Environmental Education in Portuguese national programmes and textbooks: Analysis of the sub-topics Ecosystems and cycles Pollution Use of resources and Biodiversity* Constancio Aguirre Pérez; Antonio Simón Albaladejo; Fernando Salcedo Aguilar; Alfonso Salvador Moya; Santioago Prieto Villar; Matilde Molina Ruiz; Ana Mª Vázquez Moliní. *Tobacco prevention at University: An experience with Teacher Training Students,* Julia Schwanewedel & Corinna Hößle *Conceptions of health and disease in the context of genetics and genetic technologies* Lundström, Mats *Beliefs in science or pseudoscience in health issues* Cornelia Sander & Dirk Krüger *Rheumatic Patients' Conceptions of their Disease – Contribution to the Improvement of Physician / Patient Communication* **17:00 - 18:00 Poster Session IVb Room 903** **Strand 2/3: Student Interest and motivation / Student values, attitudes and decision-making** De Villiers, Rian *Animal dissection in biology education: attitudes, alternatives and implications*	

		Wanderley Carvalho; Maria Lúcia de Rezende *The aesthetic aspect of an outdoor scientific exhibition: a case study* Hubertus Doetkotte & Ute Harms *Development and evaluation of a module for enhancing teacher students moral judgment competence* Reitschert, Katja *Competence of moral judgement in Biology lessons. How do students judge problems of biomedical sciences* Tanja Klop, Sabine E. Severiens and Marie-Christine P J Knippels *Exploration of attitudes towards modern biotechnology of Dutch secondary school students* Katarzyna Potyrala & Alicja Walosik *Strategies of forming students' attitudes to new technologies during biology lessons* Alicja Walosik & Katarzyna Potyrala *Educational projects in forming students' knowlegde and attitudes* Claudia Wulff & Armin Lude *The influence of Religious values on attitudes towards animals* Scheersoi, Annette *Learning motivation in a bilingual module on biodiversity*	
Friday **15 Sept 06**	**9:00 - 11:00 Paper Session X** **Jeffery Hall** **Strand 8 Social, cultural and gender issues in Biology education** Laurence Simonneaux, Jean Simonneaux *Teachers' roles in teaching about controversial socio-scientific issues* Gregoire Molinatti *Students meeting neuroscientists about socio scientific issues* Ralph Levinson *A model for teaching controversial issues associated with biomedicine and biotechnology* Rachel Levy Santos, Sandra Escovedo Selles and Marcia Serra Ferreria *Examining the ambiguities of the human race concept in Biology textbooks: tensions between knowledge and values expressed in the school knowledge*	**14:00 – 15:30 Paper Session XIIa** **Room 901** **Strand 5: Teaching: teaching strategies, teaching environments and educational technology** Cornelia Sommer & Markus Lücken *Elementary students' system competency – description and promotion* Simone Lachmayer & Boy Kramer *Supporting learning of a complex topic in a multimedia learning environment with different note-taking formats* William John Fraser, Mbulaheni Obert Maguvhe *The teaching of life science in special schools to blind and visually impaired learners and its implications to inclusive education in outcomes-based learning environments* **14:00 – 15:30 Paper Session XII** **Room 903** **Strand 9 Practical Work and Field Work in Biology Education**	

	11:00 - 11:30 Coffee Break **11:30 - 13: 00 Paper Session XI Jeffery Hall** **Strand 9 Practical Work and Field Work in Biology Education** Ingrid Glowinski & Horst Bayrhuber *Student labs as out-of-school settings promoting interest – efficacy and determining factors* Roger Lock *Fieldwork in biology for 11-16 year old students: curriculum practices, rationales and actions that encourage and support biology fieldwork activity* Claudia Maiß, Susanne Bögeholz *Scientific learning in the out of school laboratory XLAB in Göttingen, Germany – Evaluation of the Science Camp*	Reuven Babai, Rachel Sekal & Ruth Stavy *Interference of the primary intuitive model of living things in high school biology* Thi Thanh Hoi Phan *Testing levels of competencies in experimentation* Franz-Josef Scharfenberg, Franz Bogner & Siegfried Klautke *Learning in a educational lab with focus on gene technology: Results of teaching with authentic experiments* **15:30 - 16:00 Afternoon Tea** **16:00 - 17:00 Business Meeting** **17:00 End of Conference**	