

COLDEX

Collaborative Learning and Distributed Experimentation



Kay Hoeksema / Maria Oelinger
COLLIDE Group
University of Duisburg-Essen



February 2004
{hoeksema,oelinger}@collide.info

EU Project COLDEX



- COLDEX vision
- Challenge-based learning
- Learning activities landscape
- Scenarios: to the moon and far beyond

February 2004

LearnTec 2004 - Karlsruhe

2 of 10

COLDEX Vision



- New educational technologies in a rich social and global, multi-cultural context
- Building and supporting a heterogeneous community of learners in science and technology
- Integration of direct and remote experience with collaborative learning and modelling

February 2004

LearnTec 2004 - Karlsruhe

3 of 10

Challenge-Based Learning



- Inspiration for CBL
 - Social constructivism
 - Problem-based learning
- Pedagogical aspects
 - Stress curiosity and interest in real-world phenomena as motivational principles
 - Open-ended learning activities

February 2004

LearnTec 2004 - Karlsruhe

4 of 10

Digital Experimentation Toolkits



- DEXTs are not
 - Ready-made, experiential models describing just how to conduct a particular experiment
- DEXTs are
 - Open-ended learning environment
 - Stimulating learners to identify and solve a challenge according to the educational premises of CBL

February 2004

LearnTec 2004 - Karlsruhe

5 of 10

Learning Activities Landscape



February 2004

LearnTec 2004 - Karlsruhe

6 of 10

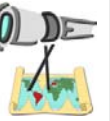
To the moon and far beyond

- Biodiversity
- Chemistry
- Seismology
- Astronomy
- Maze



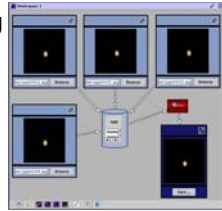
Maze Scenario

- Lego Mindstorm
- Physical (wooden) Maze
- Collaborative Modelling Environment
Cool Modes



Astro Scenario

Image processing



Moon crater calculation

