



museo nazionale della scienza e della tecnologia **leonardo da vinci**



Hands-on & Brains-on at the National Museum of Science and Technology Leonardo da Vinci

Educate in Science and Technology

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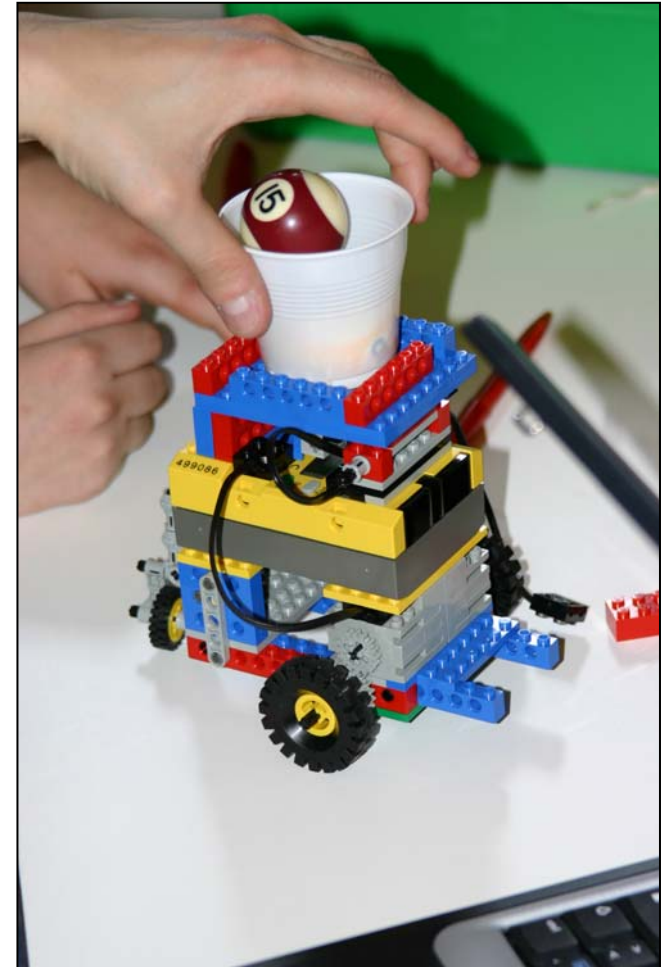
2 June 2007





Workprogramme

1. development of educational model and website emerging from collaboration between school teachers and museum staff
2. teacher training courses to familiarise teachers with informal learning model
3. kit experimentation in class
4. school visits to the i.labs of Telecommunications, Robotics, Biotechnologies
5. visit of science van with the museum explainers to the classrooms



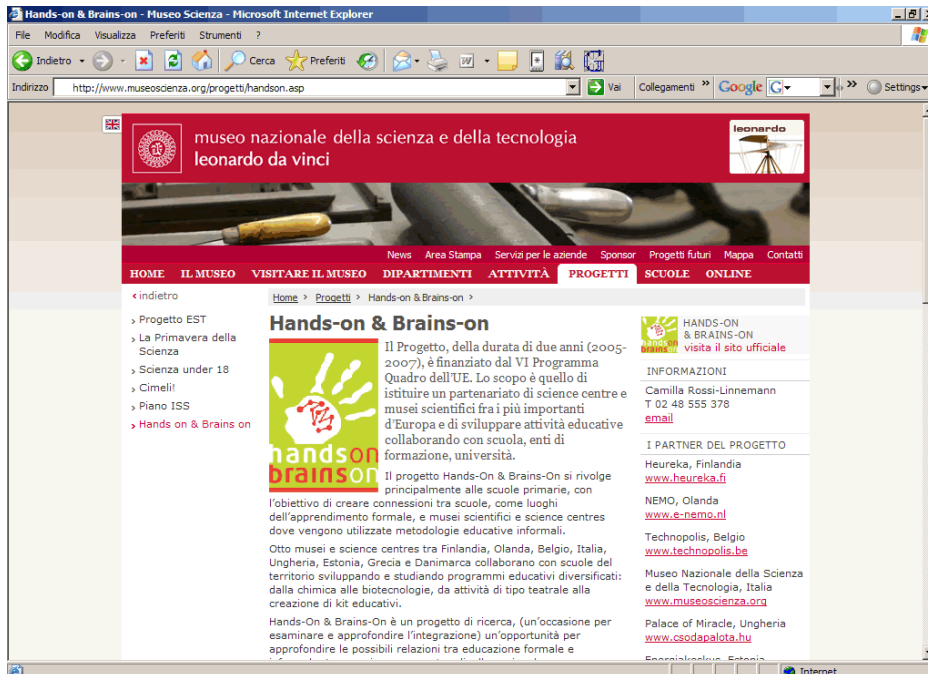


WEB PAGE

D9_educational model

On new Museum website,

Translated in Italian for participating teachers



Linked to EXPLORA for:

- general information
- downloadable manuals
- questionnaire validation

Linking partner institutions



Teacher training

D9_Educational Model

Structure

- 3 Groups working on: telecommunications, biotechnologies, robotics
- 4-day course
- hands-on methodology
- kit experimentation

Timing

course A: November 2006

course B: June 2007

course C: September 2007





Teacher training – numbers

D9_Educational Model

Course	Period	N. of teachers x days
Course A	November 2006	86 x 3
Course A	May 2007	86 x 1
Course B	June 2007	80 x 3
Course B	May 2008	80 x 1
Course C	September 2007	81 x 3
Course C	May 2008	81 x 1
Total		988 training days



Visits of the Science Van

D9_Educational Model

Period	N. of visits
Jan 07 – June 07	86
Sept 07 – June 08	161
Total	247

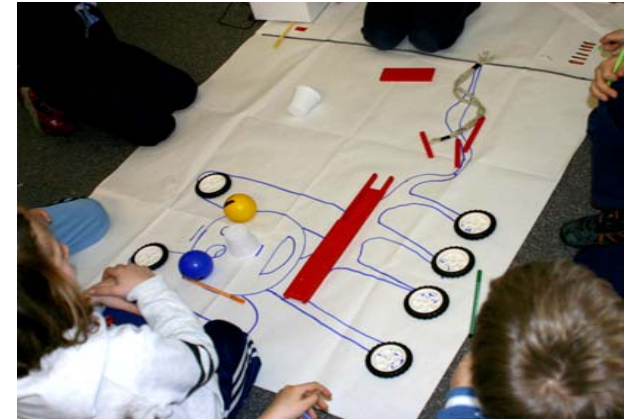




School visits – numbers

D10_School visits

Period	N. of class visits
Sept 06- Feb 07	24
Feb 07 – June 07	62
Sept 07 – June 08	161
Total	247





Educational Kits

D11_Educational Kits

Period	N. of kits delivered
November 2006	86
June 2007	80
September 2007	81
Total	247





Research and evaluation

D12_Research and Evaluation

- questionnaire
 - start up
 - mid-term
 - end of project
 - follow-up
- interviews
 - one final interview
to 2 teachers for each of the 3 i.labs
- observations of 2 classes
 - a usual science lesson not connected with the project
 - the explainers activity in class (van)
 - the museum visit



First impressions

- Teachers asked us for a deeper connection between historical and interactive parts, especially for Telecommunication and Robotics
- Teachers appreciated historical object has containers of “complete knowledge” not divided in subjects like at school
- Positive to put the teachers in the same situation of the students, to remember the difficulty to learn, to be a student
- Important to have a contact with advanced technologies, not only with historical objects
- Importance of developing skills of communication, relationship, problem solving...





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