

Julien Keutgen (Inforef – BE) 24th of October 2014 – Genoa



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ICT Equipment and Use in Walloon Schools

Situation in 2013:

- 1 computer / 7 students (secondary schools)
- IWB: 27% of schools (mainly secondary)
- Laptops and tablets: 8%
- WiFi: 55% of schools



ICT Equipment and Use in Walloon Schools

Challenges:

- Developing and improving the infrastructure
- Number of connected computers
- Teacher training
- Resource people in schools
- Cooperation between people in digital development
- Digital resources, expertise sharing







S Ecole Numérique

Initiative to promote ICT in schools.

- Teacher training
- Evaluation of ICT use in educational context
- Experimentation of new ICT-supported methods
- Tool sharing (diffusion through MOODLE...)





Resource testing in the framework of "Chemistry is All Around Network"







Animations on:

- Balancing chemical equations
- Build an atom
- Isotopes and atomic mass

Tested with:

- 73 secondary school students (14 17 year old)
- English immersion classes









Student's reactions:

"It's funny to learn because we are playing but we still learn."

"It's like a real course but we are the teacher because we do the job."

"We are easily talking and helping each other, and we can illustrate what we are saying with the website."







CONSTRUCTION DE NOUVELLES SÉQUENCES DE COURS

Learning sequence created for the project Associates:

- Experimental approach
- Animations
- Physical and virtual modelling
- IWB

Tested with future science teachers (HELMo, Liège) Student feedback on Moodle







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- Video of a "magic trick"
- Students write down and compare preconceptions using the IWB









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- Hypotheses and models





Modelling on the IWB





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- Experimentation

Visa Hones	Hissiom 2								
Surien	Projet	mous allons réaliser la réaction chimique							
Barbara		et tester le gaz qui s'en échappe em							
- Henten		approchant une allomatic enflormence							
		an bord du tube a essai.							
		· si aboiement -> 42							
		sepande la solut en 2							
		To lest allomette las préparer berlin							
		is Roll + DOUH ac NOUH							
		He							
	NOOH	MgCl2 MgCl2 + NaDH							
		si un piscipité blanc placomneux							
		apparait il y a présence de Hg2t							

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CONSTRUCTION DE NOUVELLES SÉQUENCES DE COURS

- Analysis of the investigation in a table with the macroscopic, microscopic and symbolic levels









CONSTRUCTION DE NOUVELLES SÉQUENCES DE COURS

- Achieving and structuring knowledge
- Evaluation of skills



Correction (mise en commun)

Zoomons jusqu'au niveau microscopique (au niveau des atomes) pour modéliser le phénomène.









CONSTRUCTION DE NOUVELLES SÉQUENCES DE COURS

Feedback on Moodle:

- Refreshing the subjects
- Well organised and stimulating^{*}
- Helps understand the topic
- IWB and its applications

A quel moment précis du processus ? Plusieurs réponses possibles						
RÉPONSE	MOYENNE	TOTAL				
Emissions des hypothèses	1296	2				
Activités de recherche par l'expérience	6%	1				
Expérimentation avec un mode opératoire	1296	2				
Analyse des résultats	6%	1				
Structuration des connaissances	1296	2				
Communication (présentation à l'aide du TBI)	47%	8				
Exercices	6%	1				

Qu'est-ce qui vous a particulièrement aidé à le découvrir 7 1 étant le plus important et 4 le moins important

	RANG MOYEN							
	1		2		3		4]
La vidéo de l'expérience			I					1.8
Les questions posées par le professeur								2.2
Les échanges au sein du groupe								2.1
Les expériences			•					2.2
Les ressources (guichets de renseignements)		•						1.6
L'outil d'analyse (tableau à double entrée) de la réaction chimique			I					1.8
Les modélisations traditionnelles à l'aide des cotillons et des cure-dents dans les boîtes (avant, pendant, après le phénomène)		•						1.6













www.chemistryisnetwork.eu

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Chemistry is All Around follow-up: "TICE Sciences" Project







- Working group TIChimie
- Increasing numbers of IWB
- Few adapted resources





Activities (Sept. 2014 – June 2015)



- 2. Testing in classes
- 3. Evaluation on Moodle
- 4. Editing (based on the evaluation)
- 5. Upload on a website (June 2015)







Thank you for your attention!



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