

Thinklets

Ein *good pr@ctice* Projekt

8. Fachtagung der SFIB 2006
27.9.2006

fri-tic

Rückblick: *Fachtung SFIB 2005*



Freudenthal Institute

RESEARCHGROUP ON MATHEMATICS EDUCATION



WisWeb

Applets

Materials

Software

Welcome @ WisWeb, Bienvenue, Willkommen

WisWeb is the website of the Freudenthal Institute for secondary education (students of 12 to 18 years old). The main focus of the site are **applets**; sm

Freudenthal Institut Utrecht

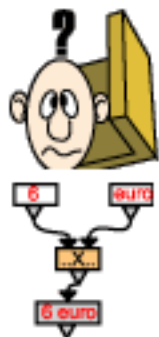
- Didactic research
- Research on and development of educational technology
- Realistic Mathematics Education (RME)

Thinklets

Applets

Materials

Software

**title**

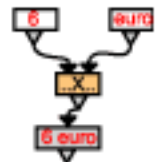
Guess the view
version 3

subject

geometry

age group

middle school (gr. 7-8) | vocational (gr. 7-8) | vocational (gr. 9-12)



Algebra trees
version 3

algebra, calculus

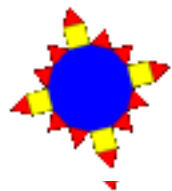
middle school (gr. 7-8) | high school (gr. 9-10) | high school (gr. 11-12)



Algebra arrows
version 3

algebra, calculus

middle school (gr. 7-8) | high school (gr. 9-10) | high school (gr. 11-12)



Filling polygons,
following Archimedes
version 3

geometry

middle school (gr. 7-8) | high school (gr. 9-10) | high school (gr. 11-12) | high school and above



Shooting balls

algebra, calculus

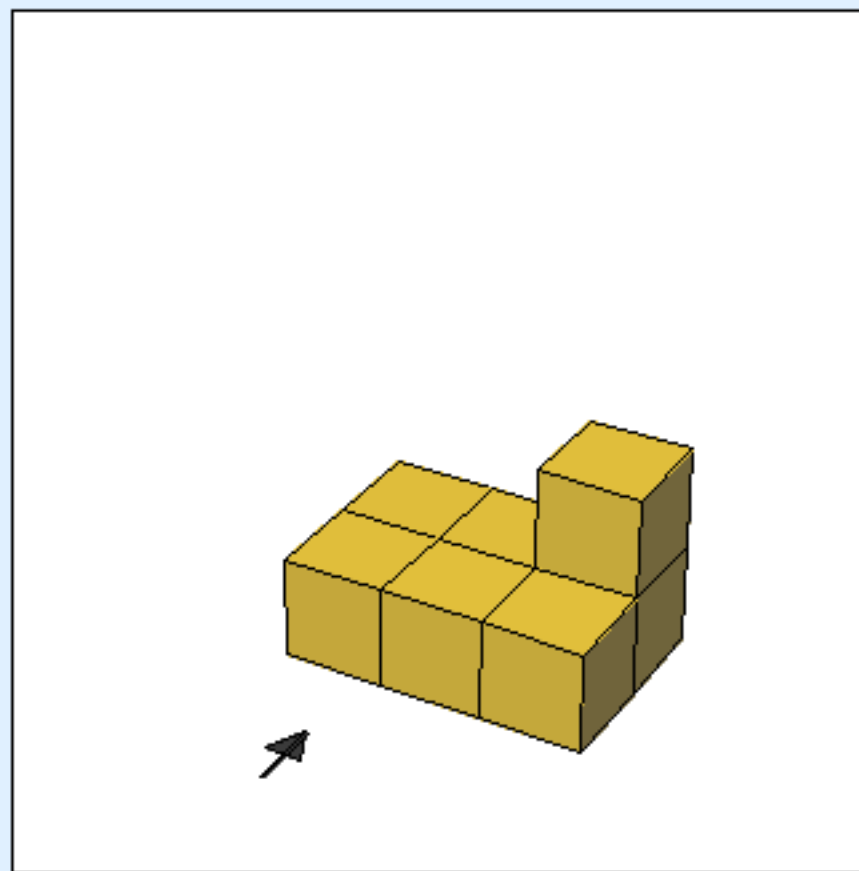
middle school (gr. 7-8)

Konzept

- Kleine Mathematikprogramme auf dem Netz
- Learning by doing
- Mathematik betreiben → Mathematik lernen
- Realistischer Kontext
- Strategien Entwickeln
- Formalisierung

Huisjes draaien

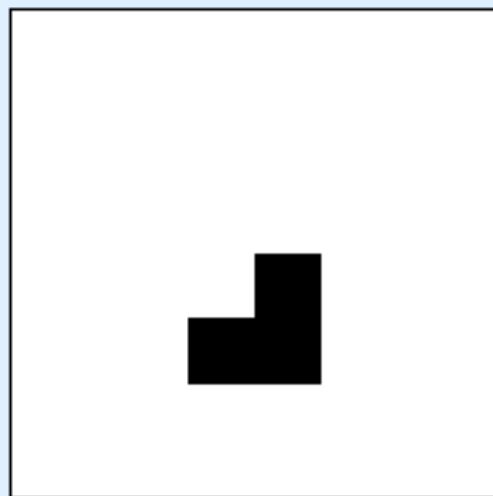
f



Question 1

Again

Rotate the building, until you see the same shape.



OK

Next question

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑳

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 **Schule im Netz**

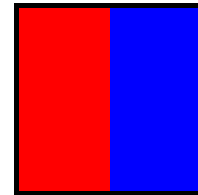
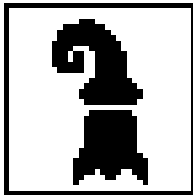


C I I P

The Swiss
Education Server
educa.ch

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Projekt Matlets

- Januar 06 3 Projektteams FR, BS, TI
- März 06 Kickoff mit Freudenthal Institut
- April 06 - Oktober 06 Phase 1: Initialisierung
- Oktober 06 - März 07 Phase 2: Produktion
- April 07 - September 07 Präsentation, Workshops

Phase 1

- Auswahl von 20 Applets: Gleichungen, Räumliche Geometrie, Algebra
- Übersetzung D, F, I
- Implementation durch FI
- Pädagogisch-didaktische Erläuterungen
- Tests in Klassen
- Evaluation
- Korrekturen

Phase 2

- Auswahl weiterer 30 Applets
- Übersetzungen
- Pädagogisch-didaktische Erläuterungen
- Publikation

Produkt

- Website
- 50-60 Applets in 3 Sprachen D, F, I
- Pädagogisch-Didaktischer Kommentar
- Welchen Zugang zu den fertigen Matlets?
 - Offen?
 - Educanet?

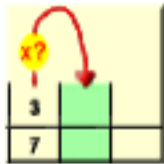
Ausblick

- Weiterentwicklung der Thinklets zu einer Lernumgebung
- Jetzt: individueller Zugang durch Schüler/in
- Zukunft: Lernumgebung mit Journal, Interaktion Schüler/in-Lehrperson, usw.

**Wenn wir an dieser Entwicklung
teilhaben wollen, müssen wir eine
Finanzierung finden**

Applets with Mathematics in Context

Ratio Table



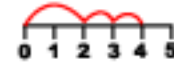
Ratio Table
version 2

Fraction Times



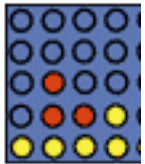
Fraction
Times
version 2

Models you can count on



Jump Jump
Game
version 2

Facts ar



www.fi.uu.nl
www.wisweb.nl

Numbers in Context



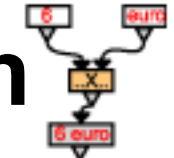
Tic Tac Go (negative
numbers)
version 3

Arrow Strings



Arithmetic
arrows
version 3

Algebra Trees



Algebra Trees
version 3

Solving with the



Danke!