

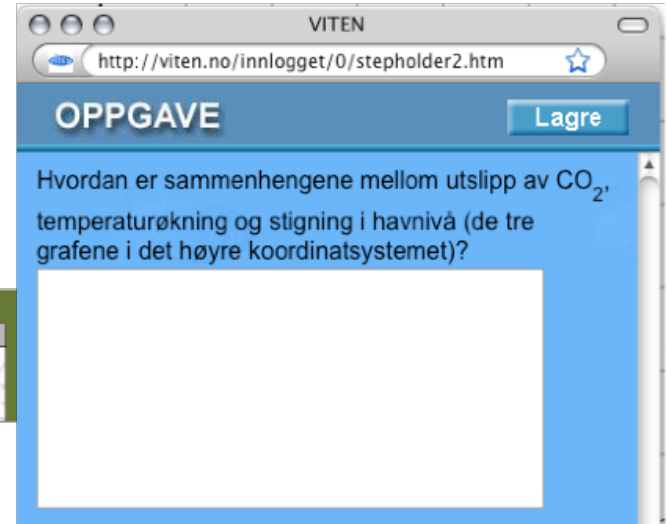


**InterMedia**  
DESIGN • COMMUNICATION • LEARNING  
[www.intermedia.uio.no](http://www.intermedia.uio.no)

# InterMedia: Interactive Representations and Models



# Future climate simulator



Klimapanelets Scenarier:

En rik verden  
  En delt verden  
  En bærekraftig verden  
  En teknologisk skjev verden

Mine Scenarier:

Oppgjøret  
  Oppgjøret  
  Oppgjøret

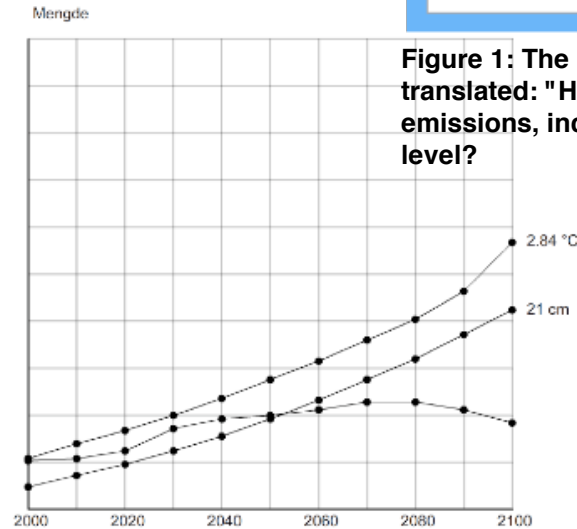
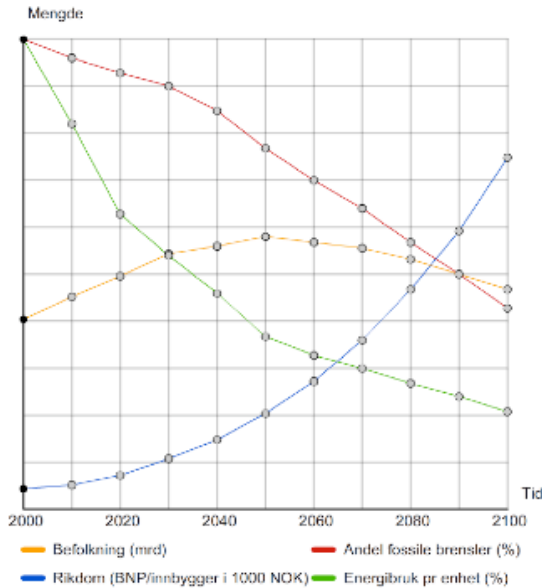
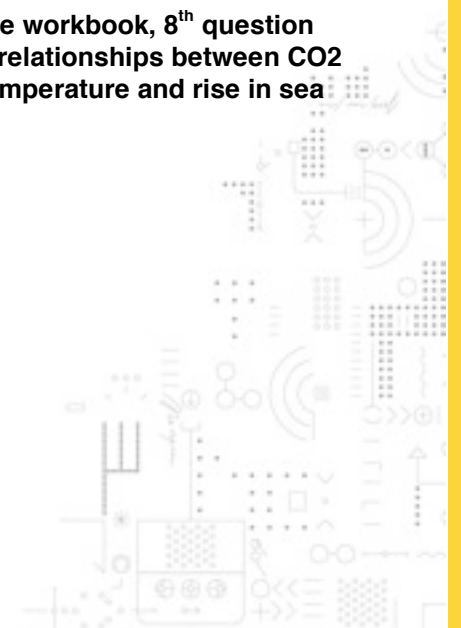


Figure 1: The layout of the workbook, 8<sup>th</sup> question translated: "How are the relationships between CO<sub>2</sub> emissions, increase in temperature and rise in sea level?"




# Simulating house design for minimal heat loss leading to minimal emission

SCY-tab : anders in Design a CO2-friendly house

**House data from the Thermal simulation**

Save Simconfig   SaveAs Simconfig   SaveAs Dataset

General   **Walls**   Roof   Floor   Doors   Windows   Ventilation   House data   Temperature



Walls area: 120 m<sup>2</sup>

**Choose walls materials**

	Material	Thickness (cm)	U factor (W°C <sup>-1</sup> m <sup>-2</sup> )
Structure	wood	2	10.000
Insulation	hemp	30	0.133

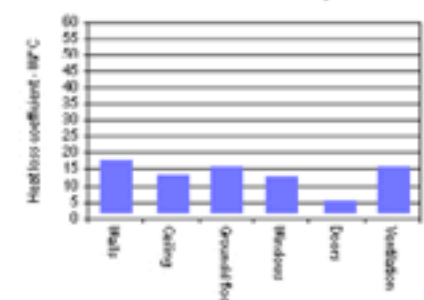
**Results**

Wall U factor: 0.129 (W°C<sup>-1</sup>m<sup>-2</sup>)

Wall heat loss coefficient: 15.444 W°C<sup>-1</sup>

House' heat loss coefficient: 68.615 W°C<sup>-1</sup>

**Heat loss coefficient of my house**



Heat loss coefficient - W°C<sup>-1</sup>

Walls   Ceiling   Ground floor   Windows   Doors   Ventilation

SCY Dataset Collector

select relevant variables   add current datapoint    add datapoints continuously

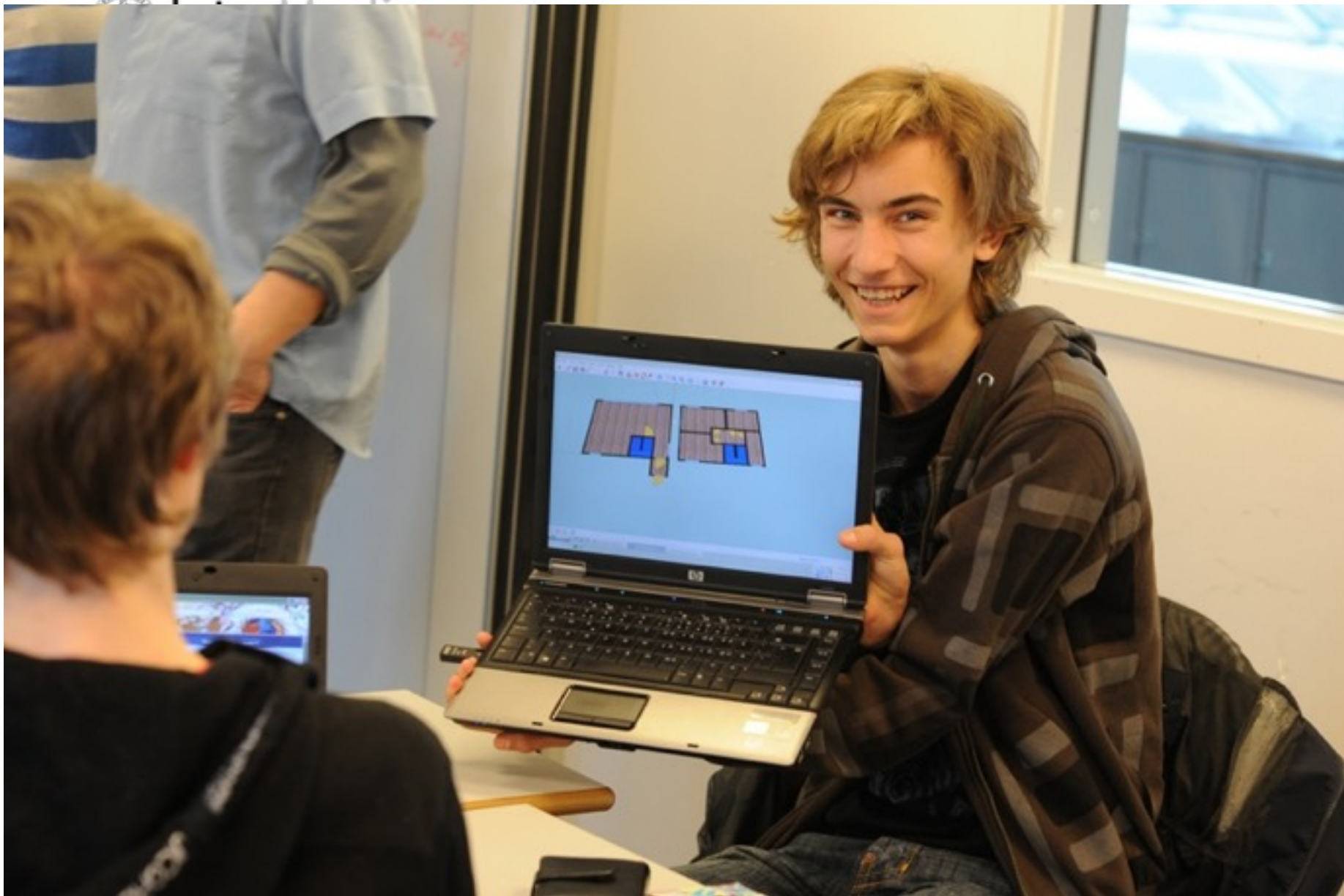
New   Search







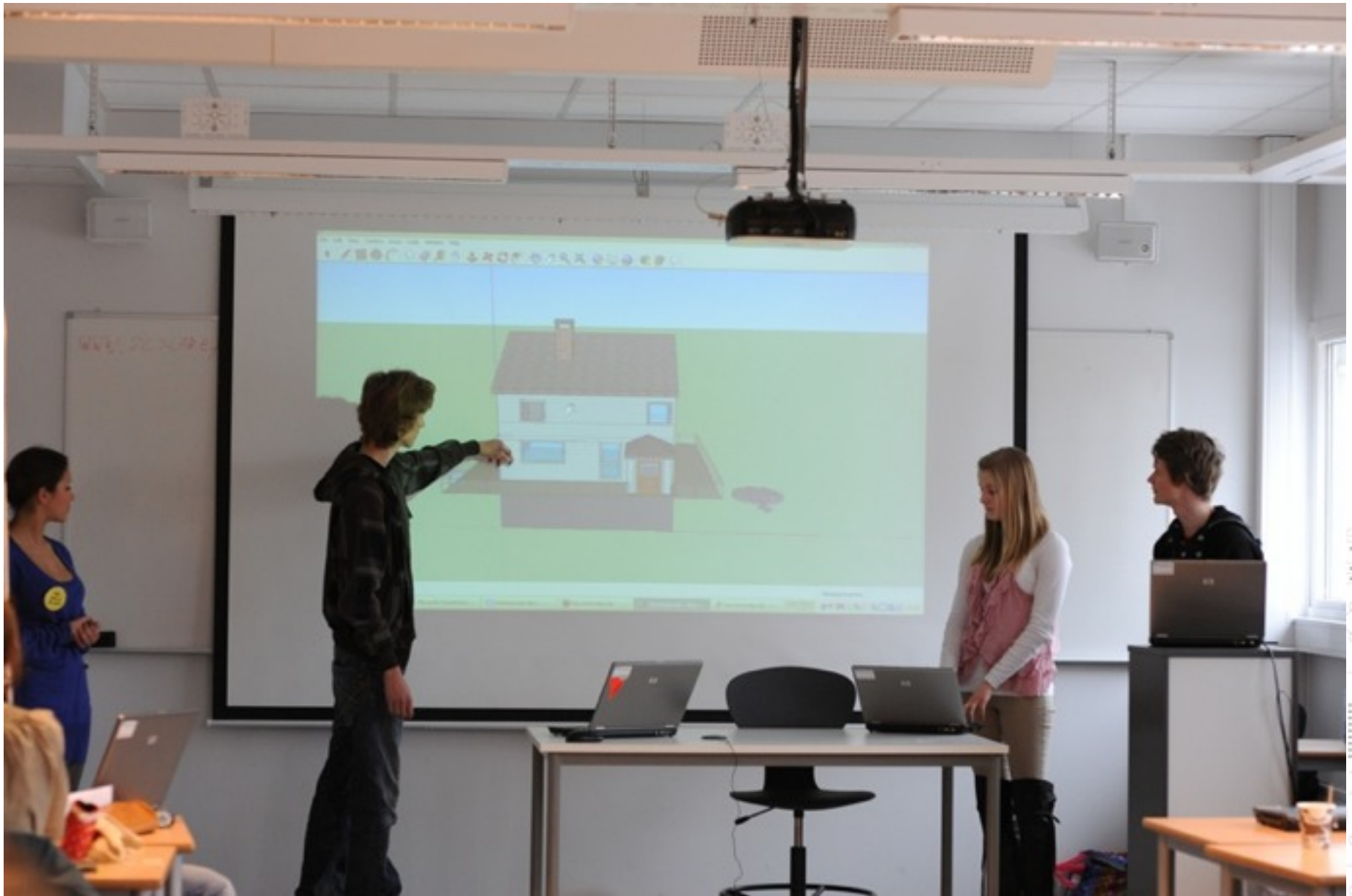
Tuesday, October 18, 2011



Tuesday, October 18, 2011













# Research questions

- How can students use technology to move from doing to understanding
- What is needed to achieve reflection-in-action
  - with regard to design
  - to collaboration
  - to (teacher) intervention
  - to setting/context (work, school, out of school, museum)

