



# Tabletop Applications

## a categorization according to the application's teaching content

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# 1. INTRODUCTION



<http://diamondspin.free.fr/>



## 2. CATEGORIZATION

- collaborative /competitive working
- Addressee
- group size
- **aim of teaching / teaching content.**



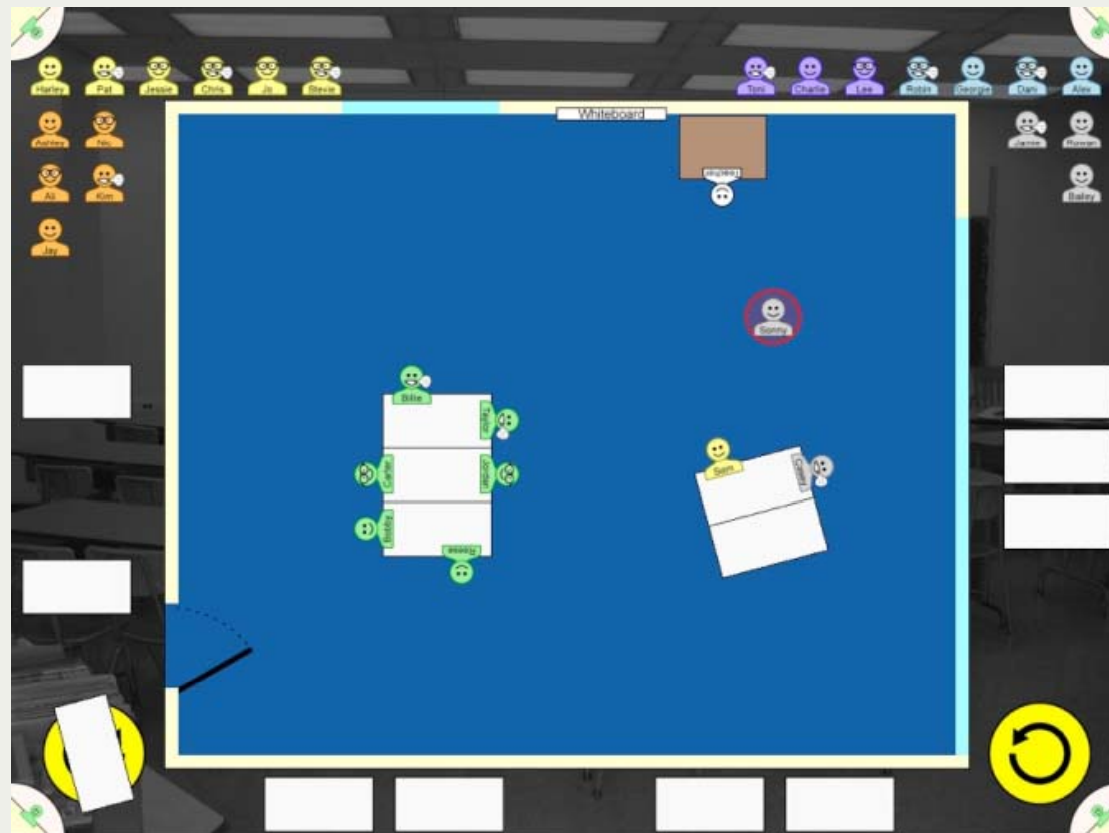
## 2.1 SOCIAL SKILLS AND EFFEKTIVE GROUP WORK

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OurSpace



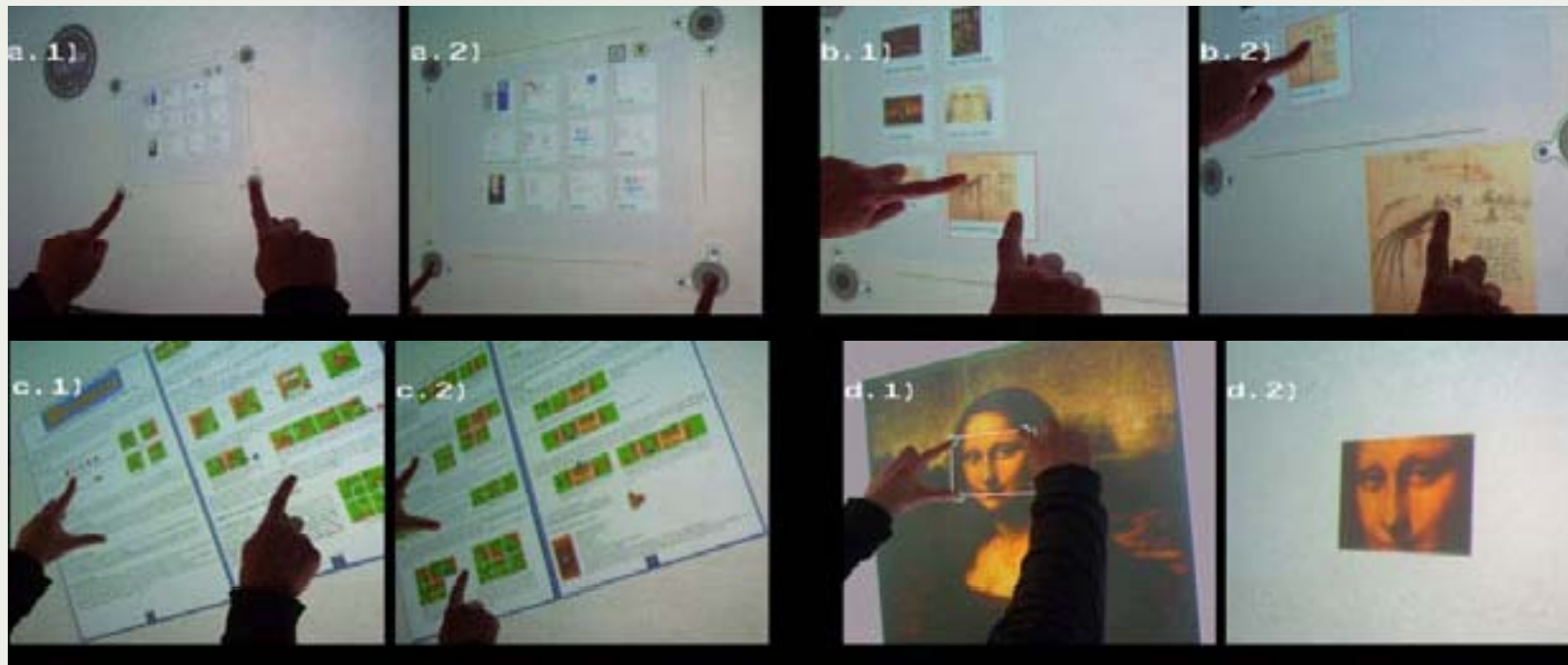
Source: Fleck et al (2009): Actions Seak out loudly with Words: Unpacking Collaboration Around the Table

Proseminar SS11

31.05.2011 – Valentin Protschky

## 2.1 SOCIAL SKILLS AND EFFEKTIVE GROUP WORK

### MuTable



Source: Schneider et al (2009): Multi-user Multi-touch Setups for Collaborative Learning in an Educational Setting

## 2.1 SOCIAL SKILLS AND EFFEKTIVE GROUP WORK

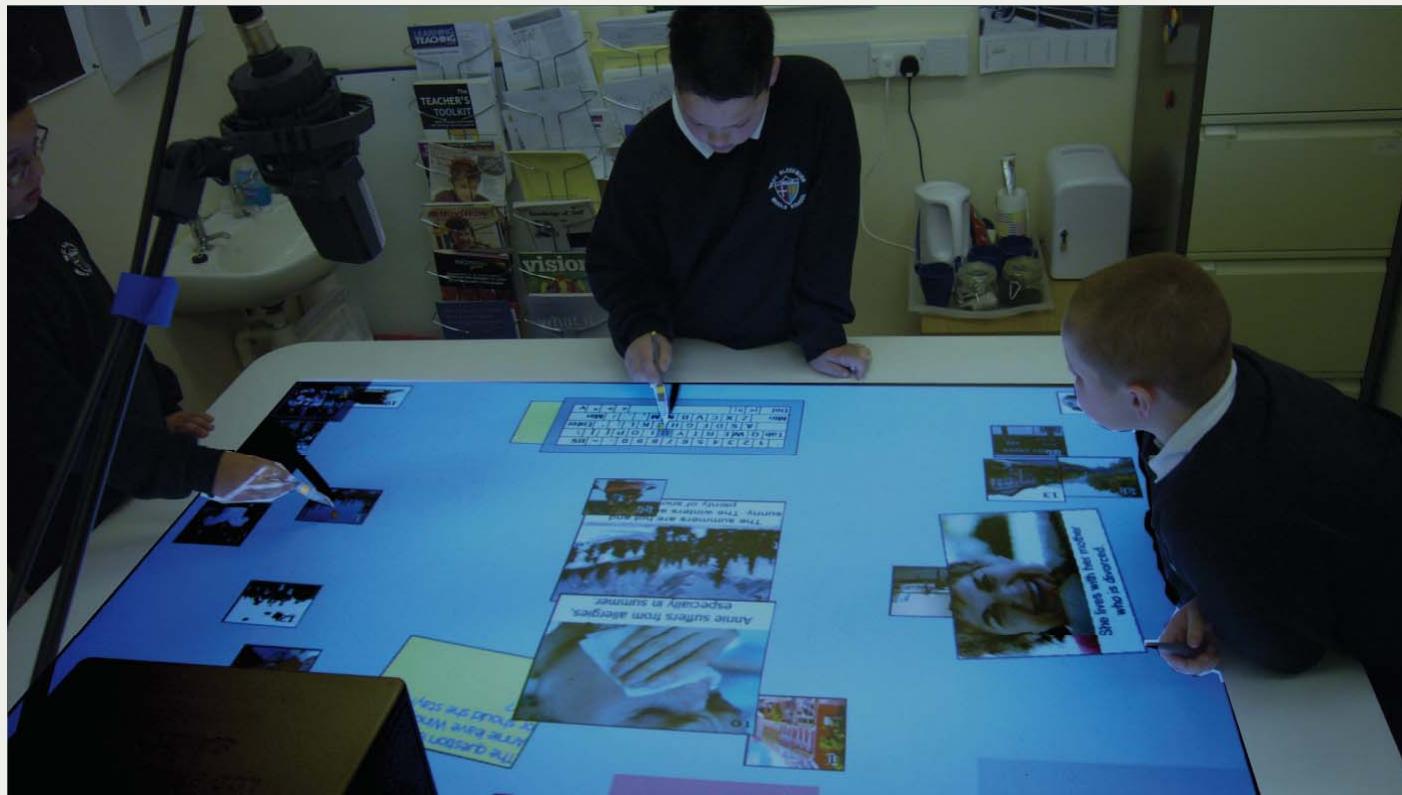
### SIDES



Source: Piper et al (2006) SIDES: A Cooperative Tabletop Computer Game for Social Skills Development

## 2.1 SOCIAL SKILLS AND EFFEKTIVE GROUP WORK

### Digital Mysteries



Source: Kharrufa et al (2009). Digital Mysteries: Designing for Learning at the Tabletop.



## 2.1 SOCIAL SKILLS AND EFFEKTIVE GROUP WORK

### Diamond Mysteries



Source: Jochen Rick (2007). Six Applications for Interactive Tabletops.

## 2.1 SOCIAL SKILLS AND EFFEKTIVE GROUP WORK

### StoryTable



Source: Cappelletti et al (2004). Enforcing Cooperative Storytelling: First Studies.



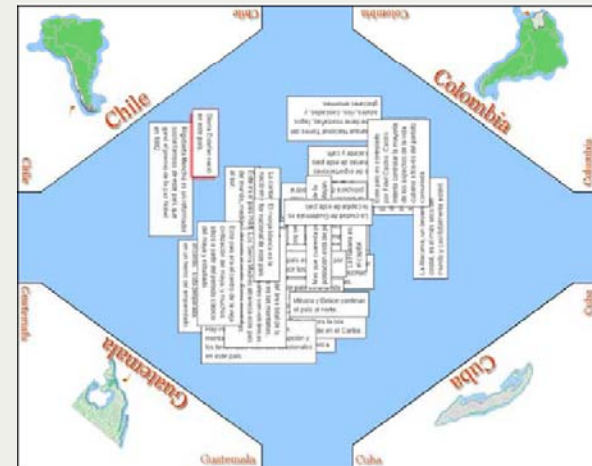
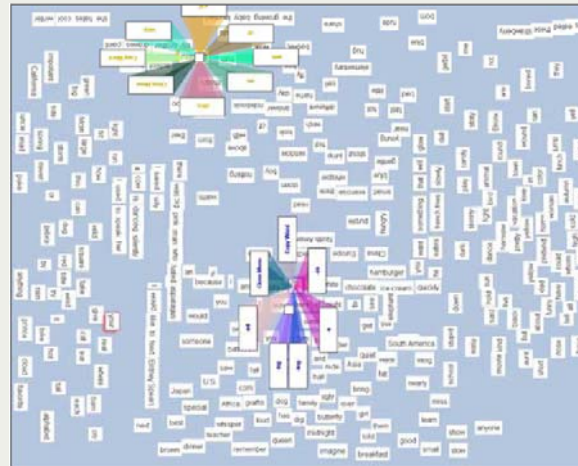
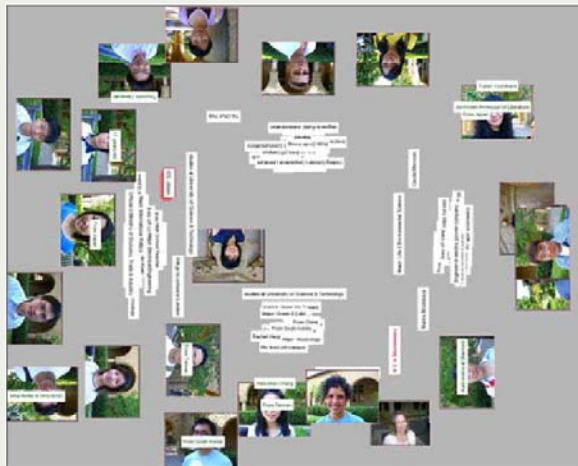
## 2.2 LANGUAGE LEARNING

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Matching Table, Poetry Table, Class Table

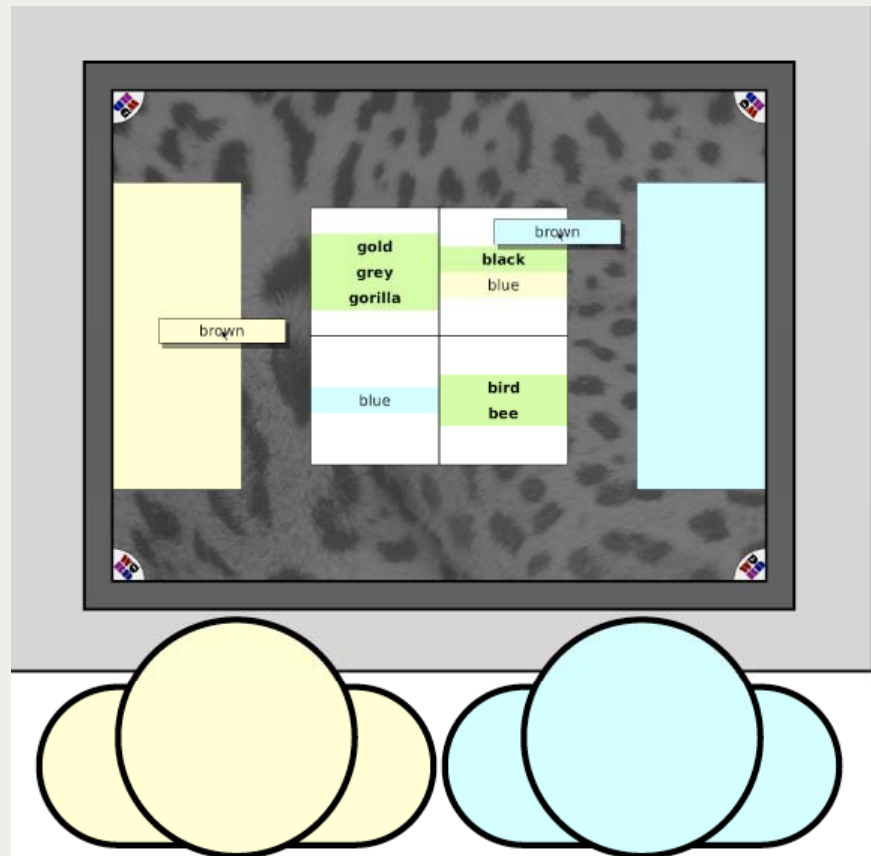


Source: Morris et al (2005). Supporting Cooperative Language Learning: Issues in Interface Design for an Interactive Table



## 2.2 LANGUAGE LEARNING

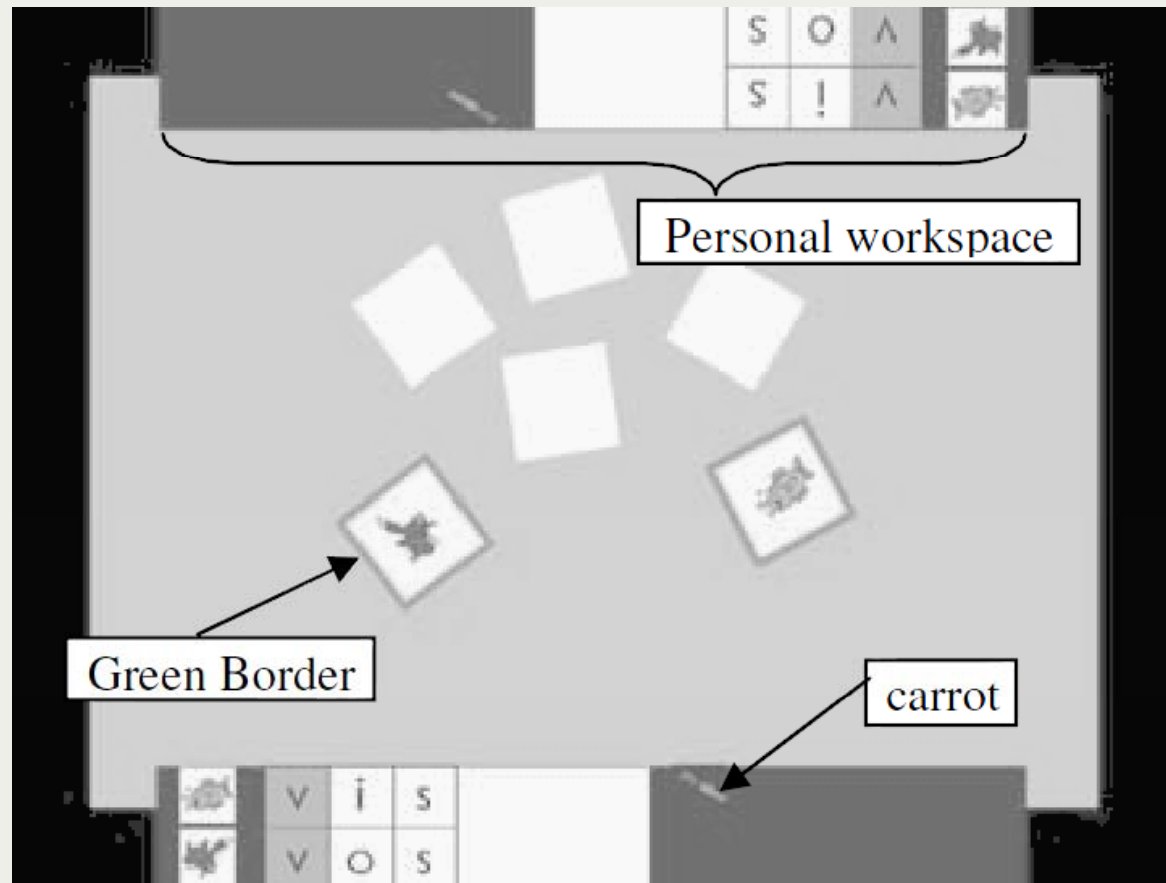
### WordCat



Source: Rick (2009). Towards a classroom ecology of devices: Interfaces for collaborative scripts.

## 2.2 LANGUAGE LEARNING

ReadIt



Source: Sluis et al (2004). Read-It Five-to-seven-year-old children learn to read in a tabletop environment.

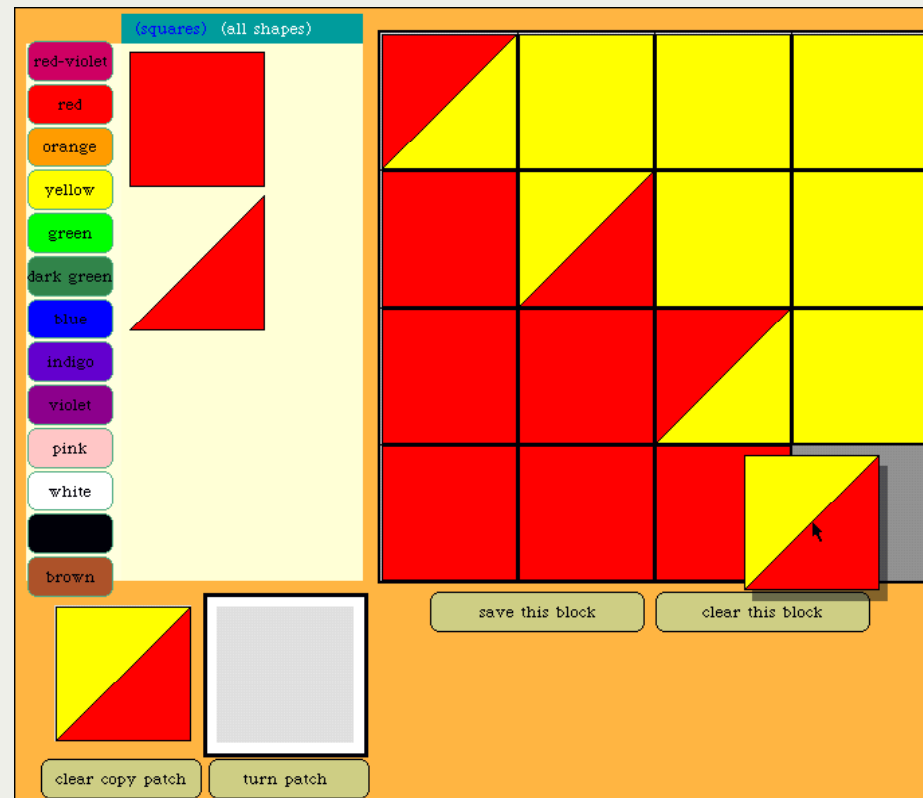


## 2.3 MATH AND ART

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### DigiQuilt



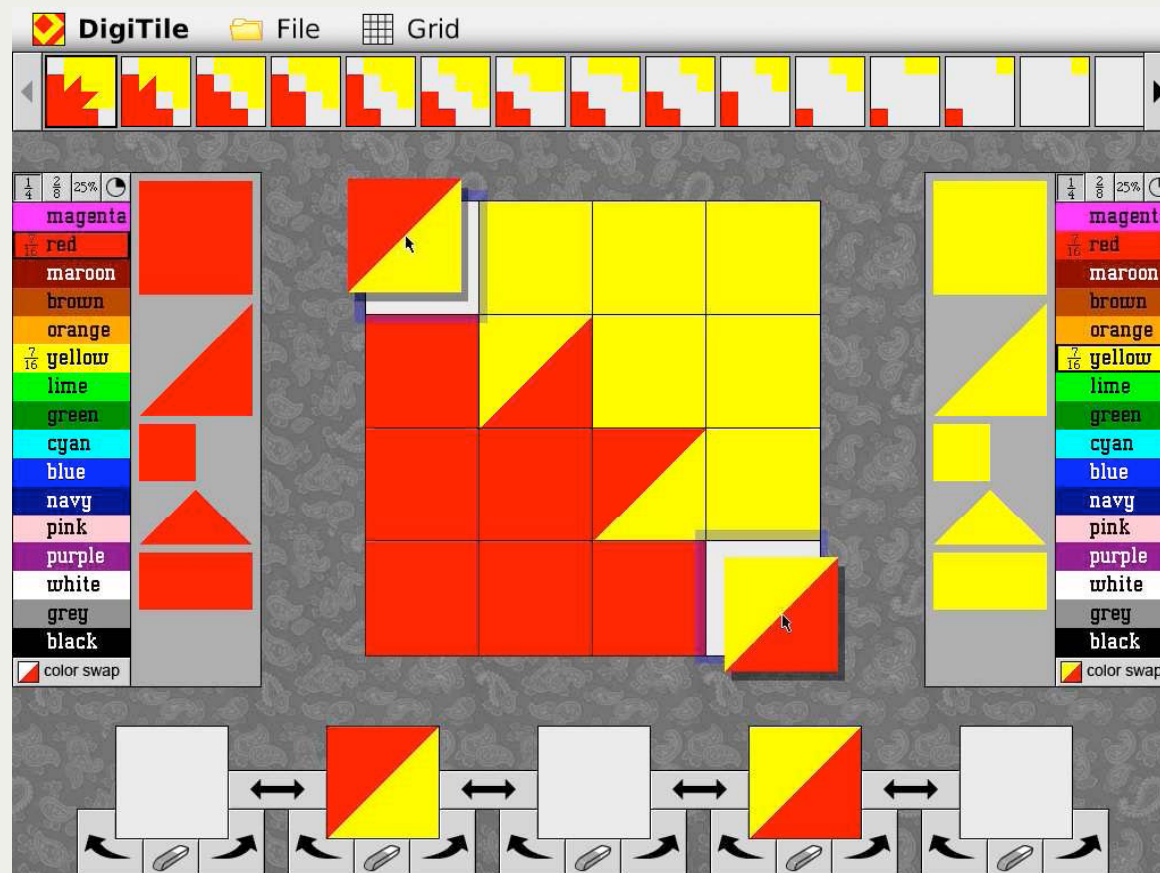
The DigiQuilt software featuring an example created by a third grader using the system

Source: Lamberty et al (2002). Exploring digital quilt design using manipulatives as a math learning tool.



## 2.3 MATH AND ART

DigiTile



Source: Rick et al (2008). From DigiQuilt to DigiTile: Adapting educational technology to a multi-touch table.



## 2.3 MATH AND ART

### Quadratic

**Combining Pieces**  
When you drop a piece next to another piece, the two will snap together to form a larger piece:

$$x^2 + x = x(x+1)$$

**Challenge**  
Create a rectangle that is  $2x$  on one side and  $x+2$  on the other side. Be sure not to overlap pieces. Overlapping areas show in a darker colour.

$$y = 2x^2 + 4x$$

$$\begin{array}{r} 2x^2 + 4x + 0 \\ - 0x^2 - 0x - 0 \\ \hline y = 2x^2 + 4x \end{array}$$

★ **Challenge** ★  
**Accomplished**

Source: Jochen Rick (2010). Quadratic: manipulating algebraic expressions on an interactive tabletop.

## 2.3 MATH AND ART

### MemoSet



Source: Pape et al (2004). Single Display Gaming: Examining Collaborative Games for Multi-User Tabletops.

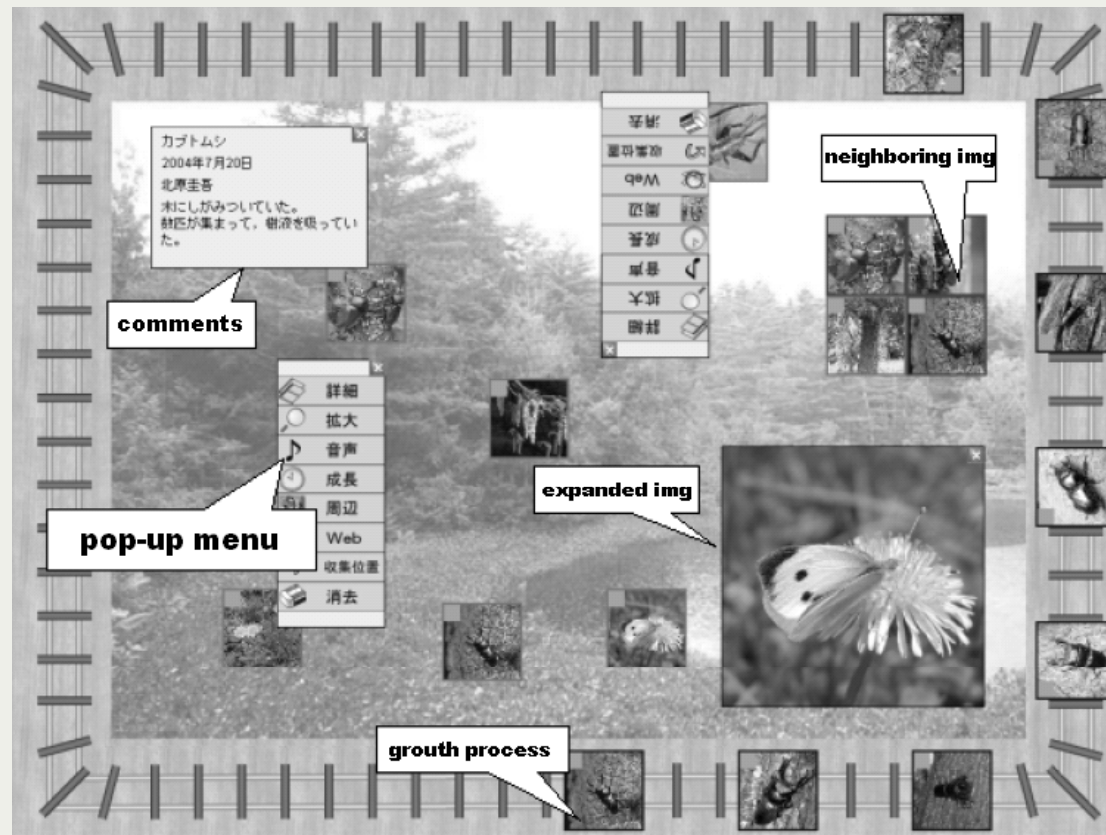


## 2.4 MIXING REAL AND DIGITAL WORLD

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### Learning Support System with Physical Objects



Source: Ishido et al (2007). Evaluation of Content Handling Methods for Tabletop Interface





## 2.5 CONCLUSION AND OUTLOOK

- Tabletops are suitable for groups to at maximum five persons
- In average classes this means five tabletops
- Alternative: Additional vertical displays for shared information
- opens the door for extending single-display groupware to shared-display groupware settings that involve multiple, shared displays\*

\* Ryall et al (2004) Exploring the effects of group size and table size on interactions with tabletop shared-display groupware