Spatial Thinking Across the College Curriculum

Specialist Meeting
December 10-11, 2012
Thanks

• Committee
  – Mike Goodcild, Don Janelle, Nora Newcombe, Tim Shipley, Diana Sinton, Mary Hegarty

• Spatial@UCSB personnel
  – Karen Doehner, Guylene Gadal, Kitty Currier,

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  – spatial@UCSB, SILC, ESRI

• All of you
Framing Questions

• Can we identify a set of general skills that are relevant to spatial thinking across disciplines?
• Are spatial skills best trained in the context of a discipline or in a more general context?
• What are the connections between “spatial thinking” courses and curricula organized for disciplines?
• What are learning outcomes for spatial thinking curricula, and what form should assessment/evaluation take?
• What are best current practices in college spatial education?
• What is the role of technologies, such as GIS and VE technologies, in developing spatial thinking?
• What are the administrative challenges and opportunities for implementing spatial thinking courses and programs at the college level?
Goals of the Meeting

• Establish common ground
  – Learn from each other to develop a broad consensus characterization of spatial thinking

• Identify important research questions
  – What do we know and what do we need to know?

• Curriculum development
  – If we were to implement a college curriculum in spatial thinking now, what would it look like?
Today: Establishing Common Ground

• Four sessions:
  – Defining the need for spatial thinking
  – Challenges of spatial thinking across disciplines
    • Psychology & STEM, Humanities, GIScience perspectives
  – Challenges of spatial thinking within disciplines
    • GIscience, Landscape Architecture, Astronomy, Chemistry
  – Current curriculum models/best practices
    • Redlands, UIC, UCSB, Michigan tech (engineering), Southwestern College

• Discussion after each session and over breaks, lunch
• Demos at lunch & during reception
Agenda for Tomorrow

• Two breakout discussions

• Framing the research agenda
  – What do we know?
  – What do we need to know?
  – Ideally proposal ideas will emerge

• Curriculum development
  – If we were to implement a college curriculum on spatial thinking now, what should it look like
  – Administrative challenges
  – Ideally some curriculum models, course syllabi will emerge