NSTA Strand: *Immersive Environments for Science Education*

Panel Discussion: *Immersive Environments for Science Education: Hyper-Learning or Over-Hyped Learning*

10:30-11:30 am, PACC 107B

ISTE Digital-Age Teaching & Learning: Innovative Learning Technologies
NSTA Sponsored Strand Sessions

- 12:15-1:15 PM: Dr. Greg Jones
  *Games and Virtual Environments: What are they and how can I integrate them in my classroom*

- 1:00-3:00 PM: Dr. Al Byers and Mr. Flavio Mendez
  *The NSTA Learning Center: Research-based e-Professional Development*

- 2:00-3:00 PM: Dr. Lisa Dawley
  *Quest-Based Inquiry Across Immersive Learning Environments: Access, Choice and Powerful New Modes of Learning*

- 3:45-4:45 PM: Dr. Chris Dede
  *Immersive Virtual Ecosystems for Learning and Assessment*
Sponsored Strand Researchers

- Dr. Lisa Dawley
  Professor and Chair of the Department of Educational Technology at Boise State University

- Dr. Chris Dede
  Timothy E. Wirth Professor in Learning Technologies at Harvard’s Graduate School of Education

- Dr. Greg Jones
  Associate Professor of Learning Technologies at the University of North Texas
Panel Discussion
Discussion Topics

- Video games are incredibly engaging. However, the content is often based on fantasy, utilizing this wonderful engine for learning that has little real world value. What are examples drawn from research that show promise for deep conceptual student learning in science?

- What are some promising strategies with assessment in these immersive environments and how might they address the accountability environment of NCLB, where there’s little room for creativity?

- How can we build authentic real world learning challenges using immersive online environments that compete with multi-million dollar video-game fidelity and marketing campaigns to still keep students engaged?

- How can these online learning environments be effectively blended with more traditional inquiry classroom investigations where students are manipulating tangible apparatus?

- What type of support is needed for teachers to make integrate virtual environments into instruction and what level of access must district administrators provide to ensure an equitable experience for all participants both inside and outside of class?
Closing Comments
NSTA Sponsored Strand Sessions

12:15-1:15 PM

Games and Virtual Environments: What are they and how can I integrate them in my classroom

Dr. Greg Jones
Associate Professor of Learning Technologies at the University of North Texas
Games, Simulations and Virtual Environments

A journey into the understanding and definitions of games, simulations, and virtual environments being used in the classroom as educational technology.
Games, Simulations and Virtual Environments

The session will discuss
What are Games
What are Simulations
What are Virtual Worlds
Using them as Educational Technology
Issues and Trends in the Classroom
NSTA Sponsored Strand Sessions

2:00-3:00 PM

**Quest-Based Inquiry Across Immersive Learning Environments: Access, Choice and Powerful New Modes of Learning**

Dr. Lisa Dawley
Professor and Chair of the Department of Educational Technology at Boise State University
Educational Innovation

• Innovative breakthroughs require years of intensive preparation
• Enthusiastic immersion in a domain results in deep, rich knowledge
• New ideas spur on more new ideas, networks generate cycles of innovation
• Give freedom to innovate Geoff Colvin
Serendipity is a major component of scientific discoveries and inventions

- Penicillin
- Silly putty
- Mauve
- Teflon
- Scotchguard
- Cellophane
- Chocolate chip cookies
- Christopher Columbus
- Grounded theory (patterns)
- Used in business intelligence
Quest-Based Learning

3D GAME LAB

Biology

In Progress 0
Available 7
Completed 0

Shallow
No Rank Yet
XP 580

Group
Rank

0
0

QUESTS
0

REWARDS
0

DASHBOARD

QUEST BUILDER
GROUP MANAGER
QUEST APPROVER
AWARD BUILDER

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NSTA Sponsored Strand Sessions

3:45-4:45 PM

Immersive Virtual Ecosystems for Learning and Assessment

Dr. Chris Dede

Timothy E. Wirth Professor in Learning Technologies at Harvard’s Graduate School of Education
NSTA Poster Session

1:00-3:00 PM

The NSTA Learning Center: Research-based e-Professional Development

PACC Broad St Atrium, Table 30

Dr. Al Byers and Mr. Flavio Mendez

National Science Teachers Association
Arlington, Virginia
Over 2,000 free lessons plans, web seminars, podcasts, and sim-based learning objects.

Free access to planning tools and live online advisors.
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