



Recreating the Physical World

3D Modeling, Virtual Reality and Printing and Make
Spaces to Power Teaching and Learning

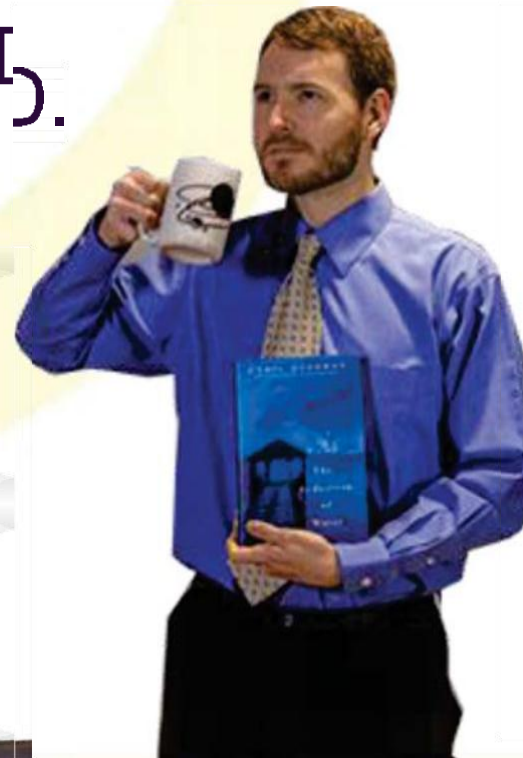
<http://tinyurl.com/mnscuboard3d>

OVERVIEW

- Introductions
- The promise of replicated, 3-dimensional resources(what might we do with this?)
- Does this map to how people learn?
- Techniques and tools
- Discussion and exploration

INTRODUCTION

- Matthew Clay, M.Ed.*
- Jeff Henline
- Jude Higdon, Ed. ⁵.



THE PROMISE OF REPLICATED, 3-D RESOURCES

1. Archive and represent physical artifacts that our students or faculty create or find.
2. Model artifacts that are hard to see.
3. Have students create 3D artifacts in a low-cost, low-stakes environment.
4. Explore physical spaces that we can't actually send students to.
5. Others?

EDUCATION

- Art
- Archeology
- Education
- Engineering
- Urban Studies
- Geography
- More?



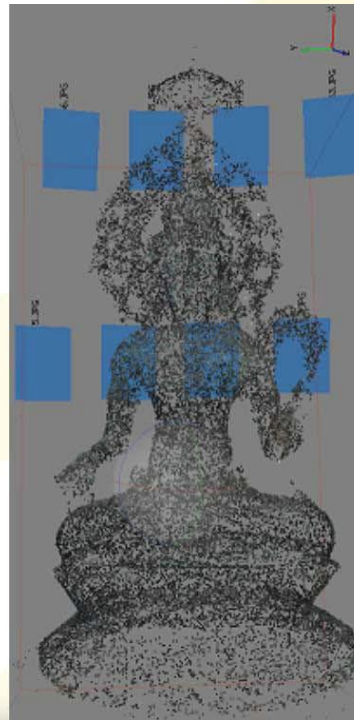
DOES THIS MAP TO HOW PEOPLE LEARN?

- Authentic assessment (Wiggins, 1993)
- Cognitive load (Sweller, 1988),
- Multiple Intelligences (Gardner, 1999)

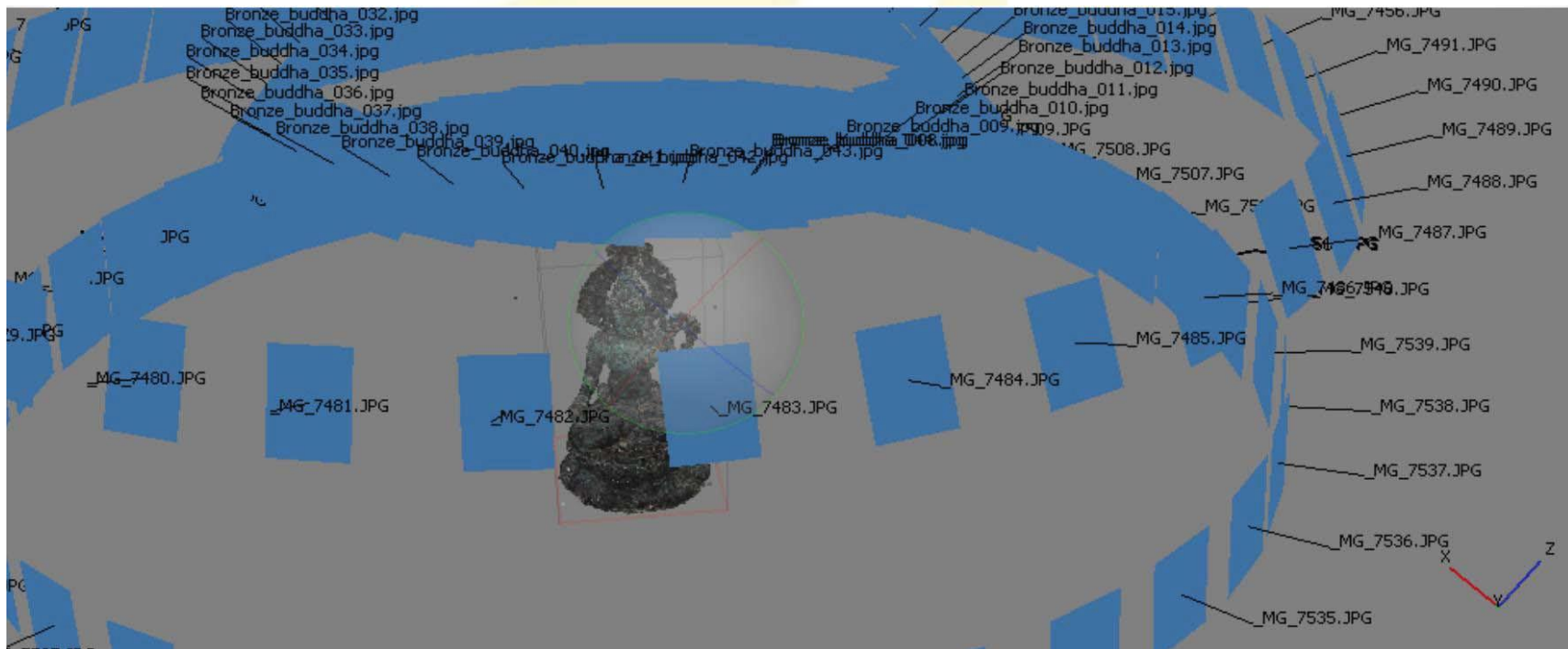


3D IMAGING: PHOTOGRAMMETRY

“the science of making reliable measurements by the use of photographs”




3D IMAGING: PHOTOGRAMMETRY



CURATION

Prospective Students Current Students Alumni Family Faculty & Staff Email Directories A-Z Index Maps Technology Library




 MINNESOTA STATE UNIVERSITY MANKATO
Big ideas. Real-world thinking.

Admissions Academics Research About Athletics Student Life Make a Gift

MavCollections Search Collections Drawers Edit Admin

Grid List Map Timeline Gallery

Total Results: 5

Cloth Box	Jade Dragon	Unfinished Stone Stamp
		

VIEWING



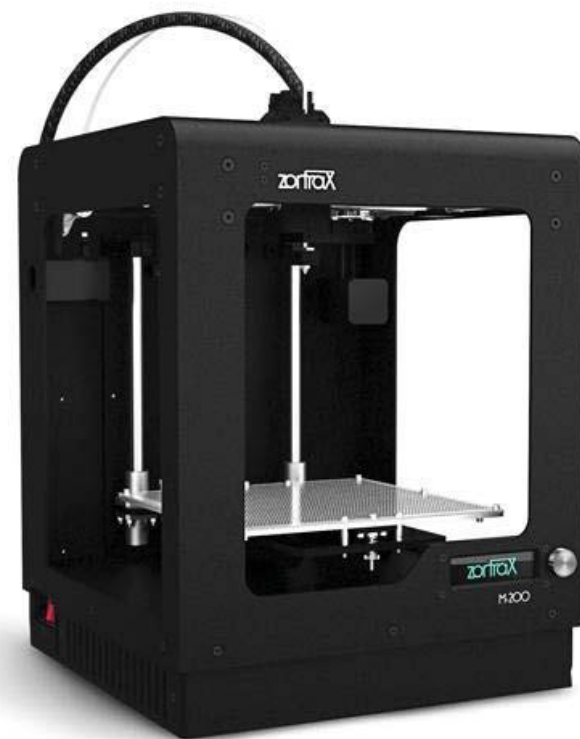
VIRTUAL REALITY



3D PRINTING



MakerBot Thingiverse



THANK YOU!

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REFERENCES

Gardner, Howard (1999), *Intelligence Reframed: Multiple Intelligences for the 21st Century*, New York: Basic Books.

Sweller, J., Cognitive load during problem solving: Effects on learning, *Cognitive Science*, 12, 257-285 (1988).

Wiggins, G. P. (1993). *Assessing student performance*. San Francisco: Jossey-Bass Publishers.