

Elementary 3D

Taking Learning to the Next Dimension



Engaging, Custom-Created 3D Content

Purpose: Inspired by studies showing gains in learning and retention with 3D simulations, a prototype of a 3D Document Camera was used to implement custom-designed 3D content for elementary students.

Pilot: McKeel Elementary Academy

K-5 Charter School; Lakeland, FL

The 3D Tool:

Custom-designed 3D content was created using a Lumens™ 3D Ladibug™ Document Camera prototype. This stereoscopic visual presenter allows educators and students to handcraft 3D activities that support standards in math, science, literacy, and more by enhancing use of any manipulatives and models.

The Implementation:

The 3D document camera was used for various classroom activities throughout campus. Some examples included:

- 1st Grade Place Value and Comparing with Math Manipulatives
- 3rd Grade Fractions and Real World Problem Solving Activities
- 3rd-5th Grade Original Poetry with Pop-Up Art Illustrations
- 5th Grade Simple Machine Invention Project Presentations
- Virtual Frog Dissection and Virtual Field Trip through Screenshot

The camera was used in lessons by teachers for modeling, by students for hands-on activities, and as an interactive presentation tool.

The Results:

Through this initial implementation, anecdotal observations were collected.

Results included:

- Increased Engagement: characterized by increased focus & longer attention span
- Learning Replay: characterized by student requests to extend and repeat instructional activities
- Transference of Concrete to Abstract: characterized by an increased ability for young students to see connections from manipulatives to abstract math concepts
- Modeling: characterized by increased ability for young students to duplicate use of manipulatives in activities modeled by teacher or peers

Additionally, the most surprising result was an increase in students' real world demonstration of mastery, characterized by an increase in applied critical thinking and the synthesis of learning to real world problem solving through the creation of working models and simulations.

What They're Saying:

Audra, 1st Grade Teacher "The students love it. They're so engaged! And I can be much more creative with the material for the students."

Clay, 1st Grader "It rocks 'cuz it brings everything to life!"

Isabel, 5th Grade Teacher "It makes the students become more aware and notice intricate things in the picture... It catches the attention of the students."

Brooke, 4th Grader "It was neat to see anything we put under it pop out in 3D!"

Manuel, 5th Grader "It's awesome. It really helps kids learn how 3D can be used."

3D Presentations with Nancye Blair:

Interactive Demonstrations - Mon & Tue @ 10am & 2pm
at the Ladibug Document Camera Booth #1049.

"The Future of Document Cameras" at ISTE UnPlugged - Tues @ 1pm.

