

A PRESENTATION ON HOW TO USE AUGMENTED REALITY TO INCREASE  
STUDENT ENGAGEMENT

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## INTRODUCTION

It has been noted by The Partnership for 21<sup>st</sup>-century skills that preparing students for College and Careers of the future to require that students be taught the 4Cs. Creativity, collaboration, communication, and critical thinking make up the 4Cs of learning and innovation skills. These skills must be taught across various content areas to include both technology literacy and life skills. Educators are required to create opportunities for students to interact with current and innovative technologies. Often educators struggle to develop activities that incorporate 21<sup>st</sup>-century skills with pedagogical practices that are innovative. Augmented reality is an emerging authentic approach to learning that creates meaningful learning experiences and supports the retention of information (U.S. Dept. of Ed., 2016). Augmented reality can also be used as a way to support student-centered learning and engagement.

## PROBLEM

Student engagement is the Problem of Practice for Division B schools within Jersey City Public Schools. Each school within the Division must ensure that instructional practices address the Problem of Practice. An analysis of teacher evaluations and walkthrough data reveals that there are deficiencies in student engagement. The deficiencies in student engagement are directly linked to lower level questioning on Blooms Taxonomy and instructional activities. Lower level questioning does not provide the opportunity to intellectually stimulate thought within students (Danielson, 2007). Innovative 21<sup>st</sup>-century instructional practices must be employed to increase student engagement. Technology can become the vehicle that moves students from the passenger seat to the driver's seat in learning.

## **SOLUTION**

A professional development workshop on Augmented Reality will be used as a way to enhance educator's repertoire in the delivery of an innovative instructional practice to increase student engagement and retention of information. A workshop model will be employed to demonstrate how and when this emerging technology can be used within the classroom. This approach will guarantee that teachers receive hands-on training that they will be able to use with their students. Teachers will receive background information on augmented reality. Mr. Shaw will support this endeavor by co-presenting and provide resources such as augmented reality workbooks and coloring books. As a business owner and developer in the field of augmented reality, Mr. Shaw will be able to answer many questions and provide possible solutions for this initiative.

## **CONCLUSION**

Attendees will gain practical experience that they can immediately begin to use. The goal of the professional development session is to equip educators with knowledge required to use current technology i.e. I pads within their classrooms to engage students in learning through augmented reality. Student engagement is further supported when students are given choices in how they will learn. 21<sup>st</sup>-century skills and augmented reality supports the idea of a student-centered learning environment. Student-centered learning shifts the responsibility of learning from the teacher to the student; learning becomes active, cooperative, or self-paced (Nanney, 2012). The use of augmented reality supports diverse learners regardless of English language background, race, or cognitive ability. This innovative approach to learning is in line with Standard I from the ISTE standards for students, which describes students' ability to transfer knowledge from current technology to emerging technology (ISTE.org, 2016).

### References

2016 ISTE standards for students. (2016). Retrieved from

<https://www.iste.org/standards/standards/for-students-2016>

Danielson, C. (2007). *Enhancing professional practice: A framework for teaching* (2nd ed.).

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learning experiences. (2016). Retrieved from <http://www.ed.gov/news/press-releases/us-department-education-launches-680k-challenge-virtual-and-augmented-reality-learning-experiences>

**APPENDIX**

**Appendix A**

**Professional Development Plan**

<b>DATE &amp; TIME</b>	Wednesday, February 8, 2017 1:30-2:30 p.m.
<b>ACTIVITY</b>	Professional Development Workshop on Implementing Augmented Reality
<b>LOCATION</b>	P.S. 28 STEM Lab
<b>COST</b>	N/A
<b>MATERIAL/RESOURCES</b>	BYOD-Ipad required
<b>Participants</b>	Open to all instructional staff. Targeted audience Pre-k-2 & Science Teachers

## Appendix B

### Professional Development Agenda

**Implementing Augmented Reality  
P.S. 28 STEM Lab  
Wednesday, February 8, 2017**

**Agenda**

**Description:**

The purpose of this workshop is to gain an understanding of Augmented Reality and how to use this emerging technology to engage students in various learning activities.

**Topics:**

Overview

- Framework for 21<sup>st</sup> Century Learning-P21
- ISTE Standards for Students

Augmented Reality 101

- Background
- How it works
- Available Apps

Student-Centered Learning

- Background
- Self-paced learning
- Cooperative groups

Presentation by Mr. Shaw

- AR in ELA
- AR in Mathematics
- AR in Science

Hands on Application

- Interact with available AR Books and resources
- Discussion/Brainstorm on future student books, content, & learning materials

Closing Remarks