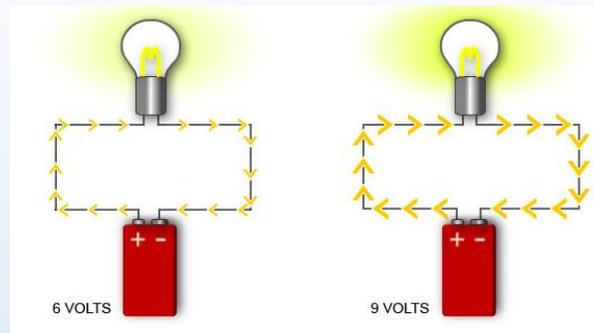


Kevin Kibala  
Pascack Valley High School  
Hillsdale, NJ  
12/5/17



## RESEARCH FOCUS:

Main research question: does creation of a board game to demonstrate learning increase student motivation and achievement?

### Introduction:

Who doesn't love playing board games? I want to find out if the fun motivational aspect of board games can entice students to learn more effectively by having the students create their own board game to model electric circuits.



### Methodology:

To test student motivation I conducted...

#### Interviews

#### Likert scale surveys

#### Grade comparisons

#### Observations

motivation/achievement



- \*Grades will be compared to an alternate project done the previous school year.
- \*Students are asked Likert scale questions about their expectations of the project versus the actual results.
- \*Students were interviewed about the time they spent on the project as compared to other projects we have done in the past.



CREATING A SCIENCE BOARD GAME: INCREASING STUDENT MOTIVATION AND ACHIEVEMENT IN LEARNING

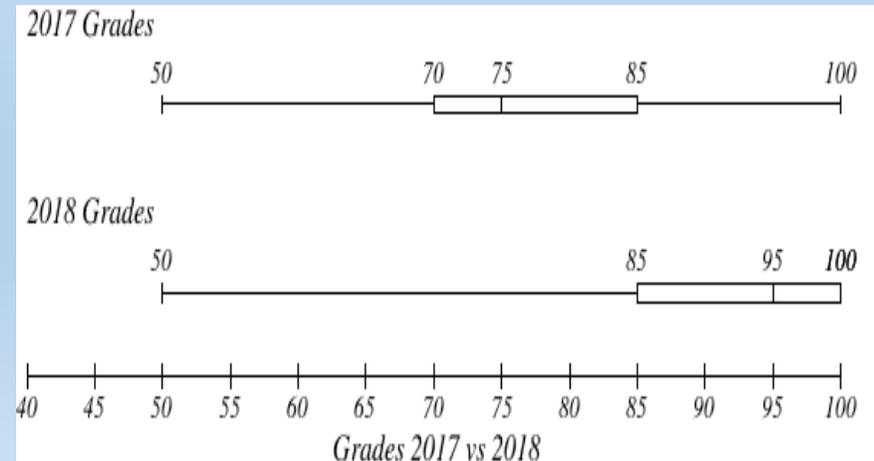
### Qualitative results:

#### Student interview responses:

"Personally the board game you can be more creative, creating the steps to the game designing the rules was fun."  
"There is more creative space than the other projects. Video had a set criterion. This had more legroom with what you can create, bend the rules of the project, and be more motivated to participate due to the creativity."

### Quantitative Results:

The figure to the right details student achievement in 2017 when they were assessed on their knowledge of voltage and current through means of creating a video. The 2018 results show assessment of the same knowledge using the same rubric but by means of a board game



Focus Question 1) will grades on performance assessments improve if the format in which students demonstrate their learning is changed to the creation of a board game?

Focus Question 2) will engagement time with the assignment improve if the format in which students demonstrate their learning is given more to student choice?