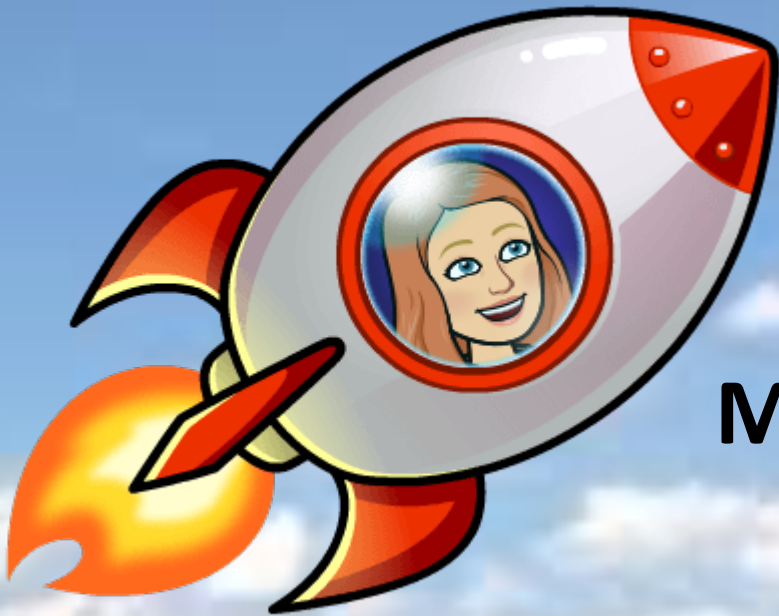


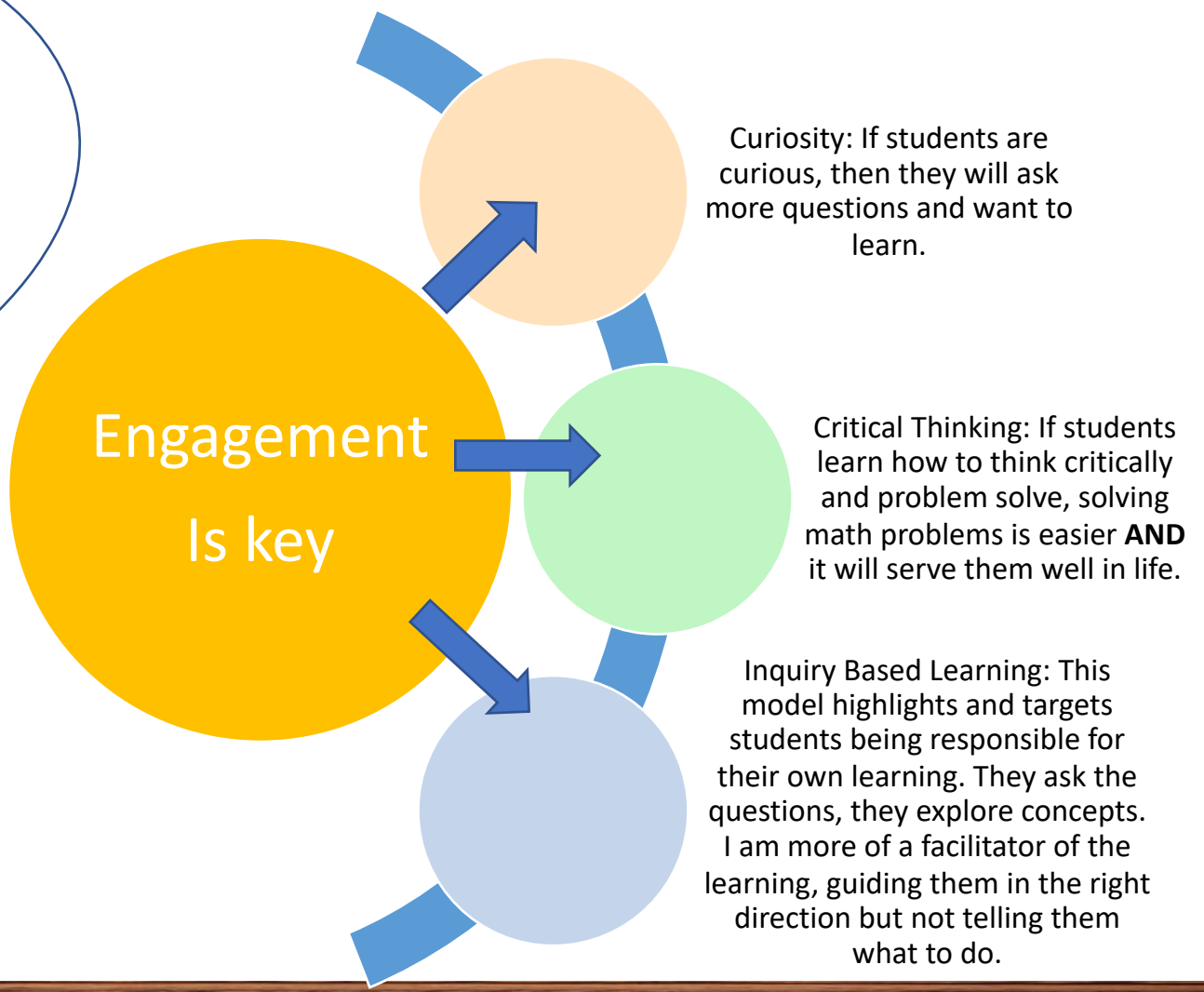
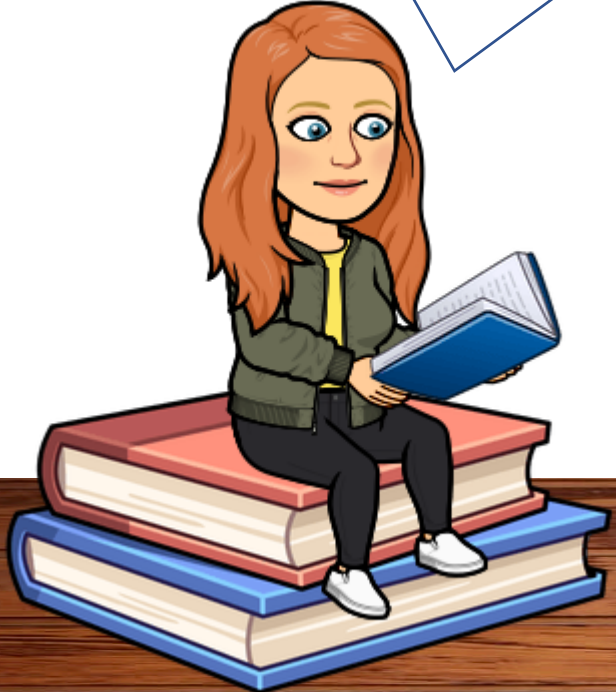
# Launch into Learning

**Cultivating Curiosity in an IBL Blended  
Classroom**

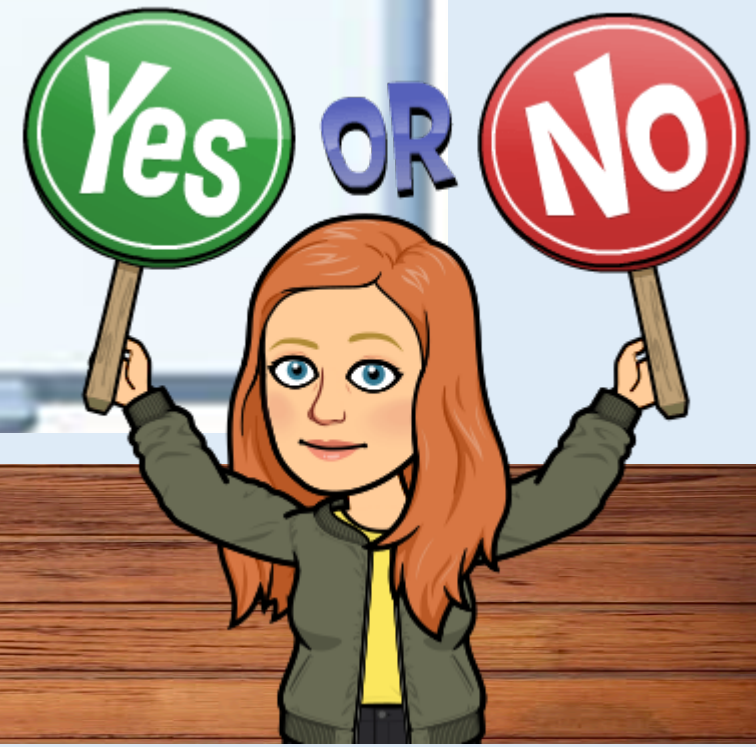


**Hannah R. Spangler  
Middlesboro High School**

How do you keep students engaged and actively participating in an online or blended setting?  
How do help students develop critical thinking skills that will enhance their learning?  
Can I use inquiry based learning (IBL) while teaching online, or on a segmented schedule?



**Will an Inquiry Based Learning approach keep 9<sup>th</sup>-10<sup>th</sup> grade students engaged, promote curiosity, increase critical thinking skills, and aid students in developing a deep understanding of geometry in a blended learning environment?**



Inquiry Based Learning, as defined by Edutopia, “is more than asking a student what he or she wants to know. It’s about triggering curiosity. And activating a student’s curiosity is, I would argue, a far more important and complex goal than mere information delivery” (Walpert-Gawron, 2016, para. 1).

There are four key components to an IBL classroom:

- 1.) Students end up asking the questions instead of the teacher;
- 2.) Research or exploration of a topic is done in class before the instruction;
- 3.) Students present what they learn during the research/exploration phase;
- 4.) Students reflect on their findings, were they correct? How did I come to that conclusion? (Walpert-Gawron, 2016).

The goal of an IBL classroom is to promote student engagement by empowering them to look beyond the textbook.

#### References

Wolpert-Gawron, H. (2016, August 11). What the Heck Is Inquiry-Based Learning? Edutopia. <https://www.edutopia.org/blog/what-heck-inquiry-based-learning-heather-wolpert-gawron>



# How to achieve an IBL Digital Classroom

- In order to implement an IBL classroom while teaching online I needed a way for students to easily submit written work online. Geometry requires drawing figures, constructing figures with tools, and writing out solutions that is more beneficial to learning when done on paper (plus much, much easier than trying it on a computer).
- Rocketbooks were the answer! Rocketbooks will allow my students to answer questions, illustrate their solutions and practice construction skill while easily and efficiently turn their work in digitally.



# Plan of Action

## Teacher Planning

Lessons will be designed based on the IBL model and posted on Blackboard. These will include a variety of types of assignments including discussions, video analysis, interactive lessons and Rocketbook assignments.

## Student Execution

Students will complete most assignments at home, or better to say attempt these assignments at home. IBL is designed around students attempting discovery of concepts on their own and then coming together to determine the whole picture.

## Whole Class Communication

Using Zoom to connect online students to the active lesson as a whole class we will analyze the different approaches, problem solving strategies, and solutions that the students have come up with. We will analyze Rocketbook solutions together and determine the true solution and facts.

Here is a sample of a lesson plan for one group of Hybrid students in class and the rest of the students online.



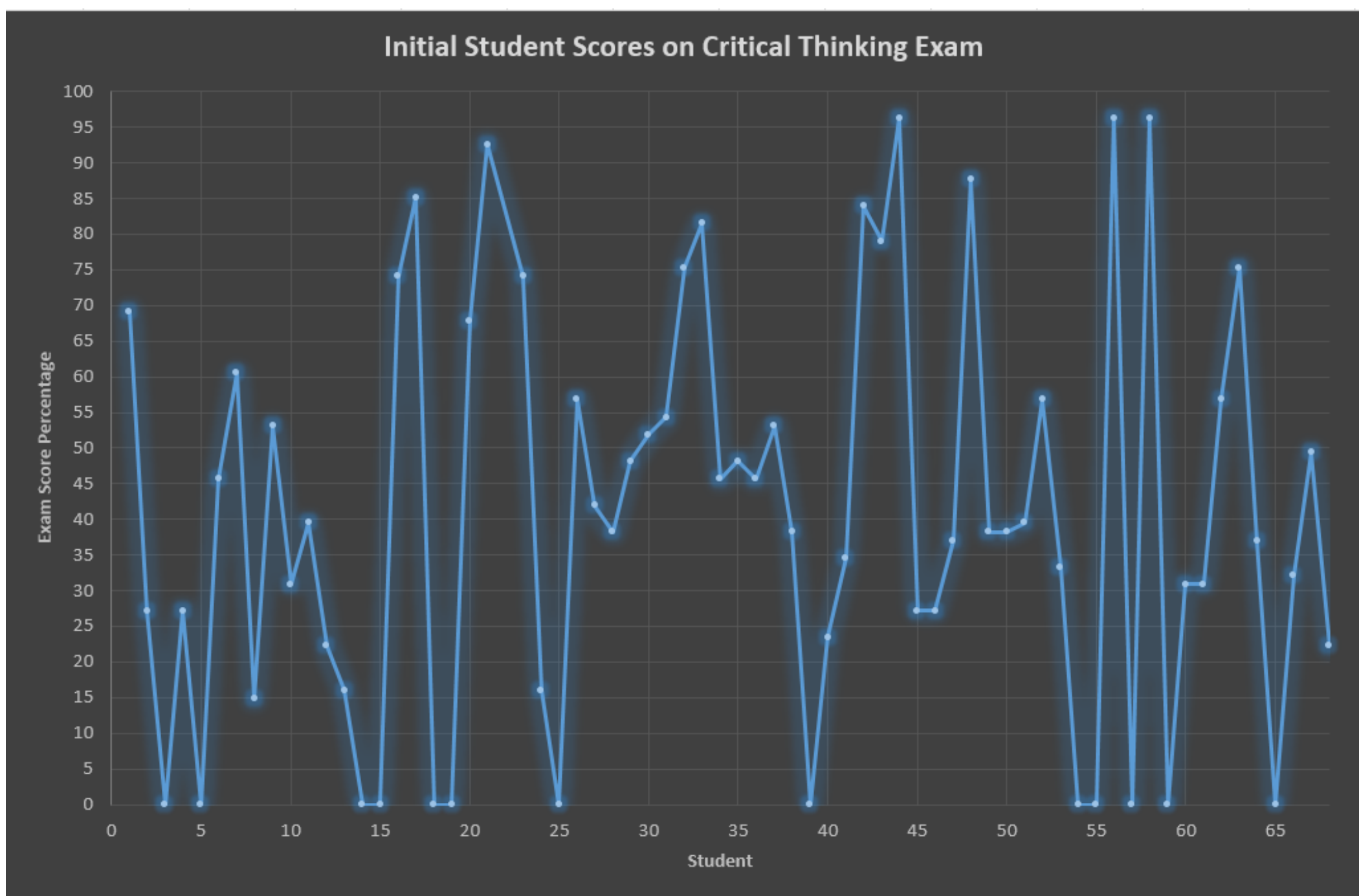
	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>
<u>Group A</u> In person Mon and Tues	<p>Discussion Post :</p> <p>"Two lines that are not parallel do not share any points"</p> <p>Is the statement Always, Sometimes, or Never True? Explain your reasoning</p> <p>1st post due by Friday 11:59pm. Students must comment on at least 2 classmates posts with either a comment or question about their response by Tuesday.</p> <p>Students can change submit an additional post later in the week if their answer changes based on material learned in class.</p>	<p>Online at home, either video called into class or watch recorded video of lesson during lesson time.</p> <p>Lesson: Points, Lines, Planes and Angles.</p> <p>Draw, Identify, Label, Define</p> <p>Students will look at their in class classmates Rocket-book uploads along with their own and discuss with classmates what they think the correct images, labels and definitions are using chat room.</p> <p>The class will then present their final images, labels and definitions to Ms. Spangler for comparison to the actual images, labels, and definitions. Students then reflect on their findings and method to the traditional mathematical solution in a Sum it Up.</p>	<p>Using the previous days lesson and finalized images, definitions and labels students will complete the attached assignments (The online BlackBoard Versions).</p>
<u>Group B</u> In person Thurs and Fri	<p>Discussion Post :</p> <p>"Two lines that are not parallel do not share any points"</p> <p>Is the statement Always, Sometimes, or Never True? Explain your reasoning</p> <p>1st post due by Friday 11:59pm. Students must comment on at least 2 classmates posts with either a comment or question about their response by Tuesday.</p> <p>Students can change submit an additional post later in the week if their answer changes based on material learned in class.</p>	<p>In class lesson.</p> <p>Lesson: Points, Lines, Planes and Angles.</p> <p>Draw, Identify, Label, Define</p> <p>Students will look at their online classmates Rocketbook uploads along with their own and discuss with classmates what they think the correct images, labels and definitions are.</p> <p>The class will then present their final images, labels and definitions to Ms. Spangler for comparison to the actual images, labels, and definitions. Students then reflect on their findings and method to the traditional mathematical solution in a Sum it Up.</p>	<p>Using the previous days lesson and finalized images, definitions and labels students will complete the attached assignments,. (The online BlackBoard Versions).</p>
<u>Rocket Book Assignment</u>		<p>Before lecture or video lesson:</p> <p>Students will be given around 5 key figures to attempt to draw, label and briefly define in their RocketBooks. They will then upload to the shared folder.</p>	

# Outcomes and Data Collection

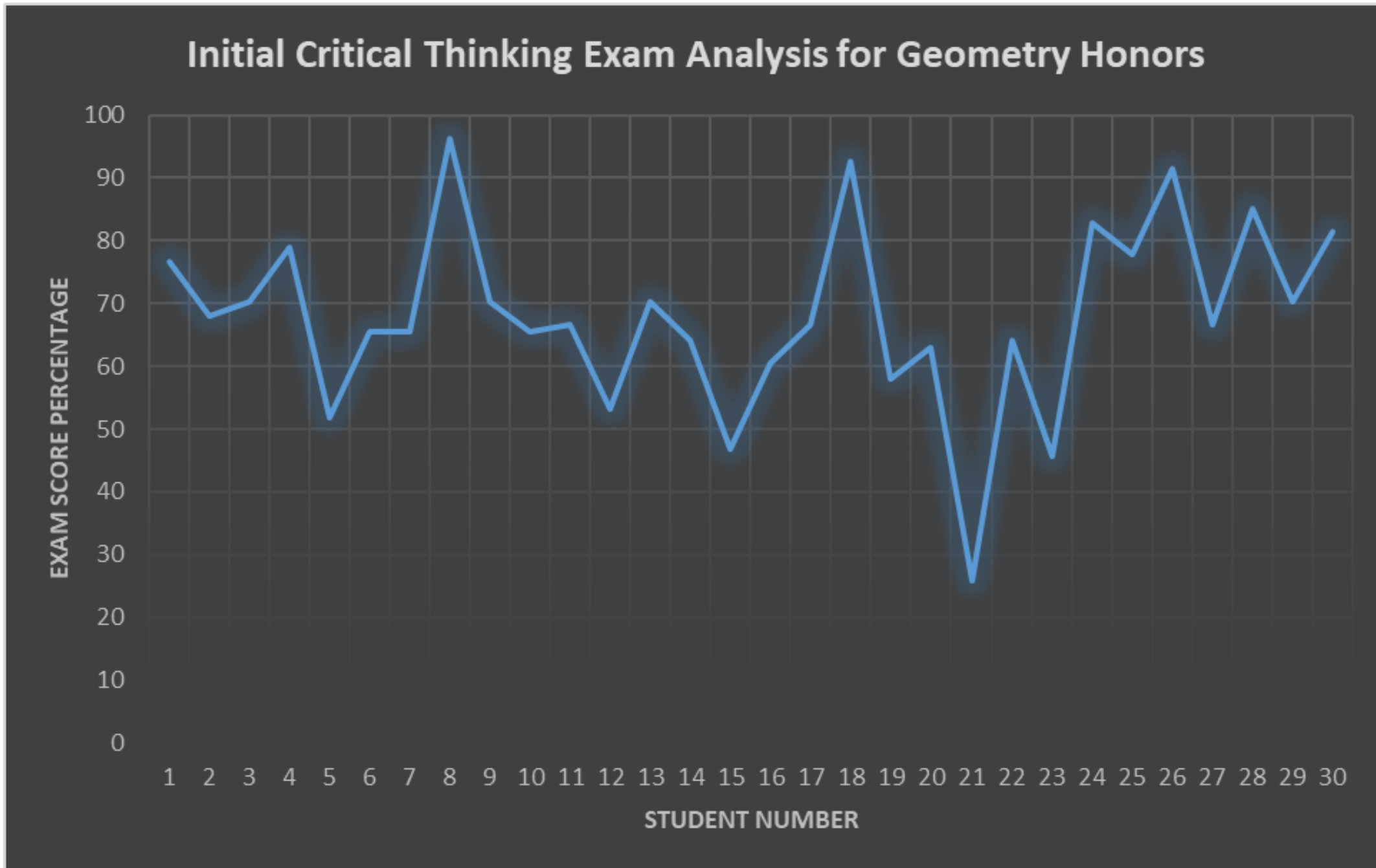
Expected Outcome	How It Will Be Measured
Increased Curiosity/Interest in Geometry	Student Survey given at the beginning of the year and at the end of each 9 weeks and will be administered on BlackBoard. (See attached copy of survey) And Teacher observations based on attached questions at the end of each 9 weeks of instruction.
Regular Participation	Student participation weekly in class discussions, RocketBook assignments, and online discussion board.
Increased Critical Thinking Skills	Critical Thinking Survey administered at 3 times throughout the year: Beginning, Middle and End
Deeper Understanding of Geometry Concepts	Pre-Assessment, Semester Final Exam, Final Exam
Active Engagement in the Course	Compiled data of the 4 above areas



- This is the data collected from the initial Critical Thinking Exam for regular geometry students.

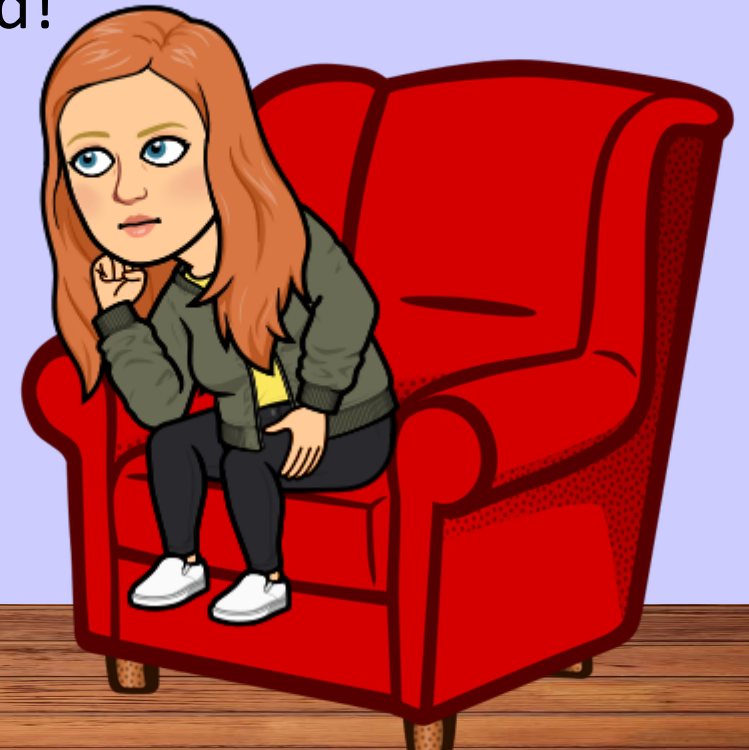


- This is the data collected from the initial Critical Thinking Exam for Honors geometry students.



# How things are going so far...

- School has only been in full swing for a few weeks now and we are already seeing a problem with students being fully engaged in their classes, especially those who are online only.
- The plans for improving that engagement and really capturing students curiosity are in progress, Rocketbooks are soon to be ordered, and most of my students seem excited!



# Coming Up!

I am going to present my initial plan and research goal to the school board soon with the hopes of presenting a successful study in the Spring. I am going to work with the MHS social media outlet and post progress updates as well throughout this study, the first post will be **ROCKETBOOKS** are here!!!

