

Brittany Williams

TILP Assignment

### **Overview**

This assignment will be geared toward my high school students in algebra 1B. I work at an alternative school for students who are credit deficient and will not graduate on time. These juniors and seniors all attend the alternative school for a reason and they all have a story. At our school the students have the opportunity to earn credits at a faster pace than at in a traditional high school setting and the classes are approximately 70 minutes long being on a block schedule. The student to teacher ratio is 15:1 and can be a little less than that at any given point during the year. Our student population has over 40% on free and reduced lunch and a lot do not have a support system at home. The number one reason that the students in my school are credit deficient boils down to homework. We as teachers know that our students need to practice to really learn the content we are teaching (especially with mathematics). I am constantly coming up with ways for my students to get the practice they need to learn the material during class. Having days in class where my students are doing activities and practicing concepts I believe accomplishes this goal.

### **Analysis**

Working at an alternative school, my students respond better when they can get up and move around the room. Sitting in the same seat for the whole class period and listening to me talk or working silently is not the most conducive environment for learning for my students. They also respond very well when the assignment is in the form of a game and they are playing for something that they want (points in class, stickers, etc.). This assignment will allow students to use their own devices or school iPad's to use QR codes to practice factoring quadratics. They live in a world where all they do all day long is snapchat and Facebook and other forms of social media. They will respond well to being able to use their devices during class. This will allow me to monitor the student's device usage because they will have to be on the app so they can complete the assignment. Students will come into the class already knowing what it means to factor a quadratic having learned it the day before. We will briefly, at the beginning of class, go over how to do this one more time as a refresher. They then will be given instructions on the assignment. The objectives for this assignment are:

- We will know what a quadratic is.
- We will be able to factor a quadratic equation.

### **Design and Development**

The students will be put into teams of two and given a QR code to start with. I will then explain to the students that we will be doing a scavenger hunt with the QR codes. This scavenger hunt will take place in my classroom and in the hallway outside of my classroom to give the students more room to work and spread out. Students will first, scan the code to get the first quadratic equation. They will solve that quadratic equation and get their answers that they will record on a record sheet that they will be given on a notability app so that they can keep organized. The

notability app will allow my students to take notes and show their work without having to use paper and pencil if they do not want to. This assignment as a whole can be done on an iPad if the students choose to use the app. Once they have their answer, they go and find the answer on another QR code sheet. If they cannot find their answer, they will know that they will have to go back and rework their answers and get help to see where they went wrong in the calculations. There will be a QR code with the caption “help” on it. This will take the students to a Khan Academy video. This video will re-explain how to solve a quadratic equation so that the students who are stuck can figure out what to do. This will allow students to talk out the problems they are having with the question they are on, work it out using the video as a guide, and as a last resort, come ask me if they are still stuck. The questions will scaffold from easy to harder as they go. The questions will be set up in this manner so the students can build up their confidence and will be less apprehensive to trying the harder questions out. The students are to continue to in this manner until they hit the card that says they are done. They will then bring their record sheets/ iPad’s up to me so I can check their work. I will ask that each student write on their own iPad, or with different colored ink. This will allow me to see who worked out what problems and so I can keep each partner accountable for doing the work. I will also be able to see which students need more help and which are mastering the concept of solving quadratics. The students will get a sticker, candy or some sort of external award so the students are positively rewarded for their hard work. This, I believe, will help the students get the practice they need of the new information but in a fun and more active way other than a worksheet. This type of an assignment also allows students to be on their devices during class but in a way that is conducive to their learning.

## **Evaluation**

In the past, I would do the practice with the students during class time using a power point with pre-made questions and then turn the students to work on their own with a worksheet. The QR code scavenger hunt, utilizing the notability app, will do the same thing as the worksheet but will get the students active which will keep them engaged and awake. Also, using QR codes forces the students to do the quadratics in the order I want them to. With a worksheet, students are able to look at all of the problems and have a moment of worry when they see the harder problems. By not allowing my students to see more than one question at a time, they are made to work out the question they are working on and work through any difficulties they may face and not just skip to the next question. This helps the students with that worry factor of “too much” work before them. High school students sometimes look at the amount of work they have to accomplish and get overwhelmed. Doing a scavenger hunt not only allows them to slow down and take it one question at a time, it allows them to get up and move around so they do not get stir crazy during class. The technology allows me to make a minor adjustment on an assignment that will allow for a greater impact to the students learning.