My Mathematical Journey

Theory of Knowledge

**Instructions:**

In this activity you are going to have to reflect upon how you learned mathematics. In order to help your reflection, you are going to work with a partner to focus on the learning of one mathematical concept found in a Key Stage Three Mathematics Textbook. Below you will find a list of some of the concepts that are taught currently in Year 8:

|  |  |  |  |
| --- | --- | --- | --- |
| Square and Cubed Roots | Interior Angels of a Hexagon | Recurring Decimals | Circumference of a Circle |
| Mixed Numbers | Factoring and Solving Quadratic Equations | The Gradient of a Graph | Calculating Volume of a Prism |

Once you have selected a concept, you are going to have to design way to teach the concept without using any traditional mathematical symbols, only words. Your explanation should be approximately 3-5 minutes in length and be appropriate for a Year 8 student. You have 10 minutes to develop your explanation. Use the space below to plan your explanation.

**Mini Lesson #1**

**Discussion Questions for After Math Lesson # 1**

Now that you have had an opportunity to teach your Math lesson to the other group, discuss with your partner group the following questions.

1. What was the most difficult part of trying to construct a lesson only using words?
2. Where there any additional difficulties you experienced because of differences in cultures, language, experience, gender, etc… that made the process even more difficult?
3. To what extent does our culture impact how we learn and understand mathematics?

**Flip the Script**

After you have watched the Ted Talk by Teaching Math Without Words, attempt to redesign your mini-lesson to one that has no words, only uses symbols. You have 10 minutes.

**Mini-Lesson #2**

**Discussion Questions for After Math Lesson # 2**

Now that you have shared your second math lesson, consider the below questions with your partner.

1. To what extent is mathematics a product of human social interaction?
2. Can we say that Mathematics is truly a universal language or is its meaning limited by our geographical area?
3. What is the role of the mathematical community in determining the validity of a mathematical proof?
4. Why is it that mathematics is considered to be of different value in different cultures?