

Lesson Plan on Tahani Amer | First MW Applied Mathematician at NASA

Teacher Name: Mr. Bari

Grade Level: High School

Topic: **Drag Force**

Subject: Applied Mathematics



Flipped Classroom

Students will receive [this link](#) from the flipped classroom website at least 24 hours prior to the class meeting, so as to learn about the mathematician’s story and come to class with any questions.

Learning Objectives:

Students will be able to use their mathematical knowledge to solve physics and engineering problem.

Learning Goals:

1. SWBAT learned about Tahani Amer, the first Muslim Woman Executive at NASA.
2. SWBAT understand that education is the greatest equalizer via the story of Tahani Amer.
3. SWBAT use their math skill to solve physics and engineering problem.

Instructional Strategy, Everybody Writers :

Everybody Writers, can prepare students to engage rigorously in classroom discussion. I will apply this tool in my classroom to accomplish two goals: my short term goal is to make me Cold Call (calling on students to answer) ready and the long term goal is to help students discover writers inside them by using cold calling strategy.

Lesson component	Students will complete the Do Now in 5 minutes (See Page # 1 on the worksheet) Worksheet is divided in three components: (1) DN (2) BI and (3) ES
Activity # 1 (0- 4 minutes)	
Activity # 2 (20 minutes)	Main Task: Students will form in a group and will solve the problem. There are 4 students in a group and each one has a job assignment (Group Leader, Engineer, Scientist, Mathematician)
Activity # 3 (10 minutes)	Teacher will go over the Main Task on the whiteboard.
Activity # 4 (5 mins)	Student will complete the exit slip in 5 minutes

Activity # 5	Briefly overview discussed throughout the period
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Every second matters!

Time	Teaching activities / Student activities	
Activity # 1 (5 mins)	Teacher distributes the handout for students to work with groups Explain the “Do now” Listening the instructions Teacher is Circulating while students completing “Do Now” Solving the Do Now Going over the “Do Now” Students will check their answers to make sure they have full understanding.	
Activity # 2 (20 mins)	Group activity	Students will compare their diagram with others in the group.
Activity # 3 (10 mins)	Teacher in action	Teacher will go over main task
Activity # 4 (5 mins)	Assessment	Students complete Exit Slip in 5 Minutes
Activity # 5 (2 mins)	Recap I briefly overview what we discussed throughout the period in 5 minutes.	Ask student to summarize what they have learned