Lesson Activity Plan 6

1. Content: Describe ***what*** it is you will teach. What is the content?

I will teach students to use exponent rules to multiply two numbers written in scientific notation.

1. Learning Goal(s): Describe what specifically students will ***know*** and ***be able to do*** after the experience of this class.

Students will know that they can rearrange the factors (thanks to the commutative property) when they multiply two numbers written in scientific notation. They will know that doing this allows them to use the exponent addition rule, and they will be able to correctly apply that exponent rule to this situation.

1. Rationale: Explain how the content and learning goal(s) relate to your Curriculum Unit Plan learning goals.

This lesson addresses another operation that students must learn how to do with scientific notation: multiplication. By teaching them this through the exponent rule, they will see how the exponent rules help us work with scientific notation.

1. Assessment: Describe ***how*** you and your students will know they have reached your learning goals.

My students and I will know that they have reached their learning goals through their explanations of how the exponent rule connections to the starter, along with a successful completion of the worksheet.

1. Personalization and equity: Describe how you will provide for individual student strengths and needs. How will you and your lesson consider the needs of each student and scaffold learning? How specifically will ELL students and students with learning disabilities gain access and be supported?

Like the past few activities, this activity begins with a starter that everyone can access. This activity also asks students to look back at their notes and previous assignments, which will support students who may feel lost at the moment but were successful in previous activities. Again, students will be grouped with heterogeneous groups to provide support, and the visual presentation of methods will allow ELL students to follow along.

1. Activity description and agenda
   1. Describe the activities that will help your students understand the content of your class lesson by creating an agenda with time frames for your class. Be prepared to explain why you think each activity will help students on the path toward understanding.

See attached timed agendas.

* 1. What particular challenges, in terms of student learning or implementing planned activity, do you anticipate and how will you address them?

I anticipate that students might struggle to understand how the exponent rule connects to multiplication. To address that, I included two hints in the timed agenda that I can give them if they need some direction. In addition, the starter is intentionally designed to help convince them of that connection, since they can use a calculator (which they know to be true) to check the work.

1. List the Massachusetts Learning Standards this lesson addresses.

CCSS.MATH.CONTENT.8.EE.A.4

Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used.