Timed Agenda LAP 4 Day 1

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| Time | What Students Will Do | What Teacher Will Do | Rationale |
| 10:36 – 10:45 | * Enter room * Do starter * Share guesses | * Starter: Time to guess! How many miles away is Neptune? How many centimeters wide is a dust particle? * Hand back exit slips from yesterday * Write guesses on the board | This starter gets students to think about really big and really small numbers, which is what scientific notation is all about. |
| 10:45 – 10:55 | * Volunteer what they remember about scientific notation * Look back at the notes and worksheet about scientific notation from earlier in the unit | * Tell them the real answers: Neptune is 2.7 billion miles away and a dust particle is 0.00005 cm wide. * Write these numbers on the board (including all the zeroes for the billion) and remark that it’s pretty tiring to write out all those zeroes. I wish there was an easier way! * Wait to see if someone brings up scientific notation (which they learned in the jigsaw). If no one does, tell them that that’s actually what scientific notation is for – to make it easier to write numbers with a lot of zerioes. * Tell them to turn back to the notes they took on scientific notation and the worksheet they completed during the jigsaw. * Ask for a volunteer to remind us of the rule for positive exponents – show an example. * Ask for a volunteer to remind us of the rule for negative exponents – show an example. * Emphasize that for standard scientific notation, which we will use, there should only be one number to the left of the decimal place. Point out that you can always place a decimal point after the ones place. | Students have not thought about scientific notation since first learning the basics several days ago, so they will need a refresher. By framing scientific notation as an easier way to write really big and really small numbers, the topic is introduced as a natural solution to a problem. This begins to give it a real-world purpose. |
| 10:55 – 10:57 | * Listen to instructions | * Before we can do a lot of cool real-world comparisons using scientific notation, we first need to get really fast at converting between regular notation and scientific notation * Hand out worksheet * Tell them that they’re going to speed through this worksheet. They’ll only have 15 minutes, which gives them about 30 seconds per problem. They need to do as many as they can as fast as they can! | My students love worksheets, but many of them work much slower than they need to and overcomplicate simple tasks. I want to instill a sense of urgency in my students, and I feel like I know them well enough by now to know that they can handle that. Converting between regular and scientific notation should be something they do very quickly, and they need to get good at it if we’re going to move on to the more complicated operations with scientific notation. |
| 10:57 - 11:12 | * Complete worksheet * Extension: Pennies problem or ant and elephant problem | * Circulate | Students will get a lot of practice converting between regular and scientific notation, which will make them feel more comfortable working with those numbers. |
| 11:12 – 11:20 | * Switch papers with a neighbor and correct their work * Ask questions about any of the problems | * Hand out colored pencils * Put answer key on Elmo * Tell students to switch papers with a neighbor and correct their work in colored pencil- don’t erase any original answers | I find that when my students check their own work, they get a little lazy and don’t always catch all their own mistakes. When someone else grades your paper, you are much more aware of what’s right and wrong. |
| 11:20 – 11:24 | * Swap back papers and look over the corrections * Ask any lingering questions | * Ask students to swap back papers and look over the corrections. Do they have any questions about any problems? | This will give students the opportunity to see how they did and clarify any lingering misunderstandings. |
| 11:24 – 11:28 | * Talk with table and write down ideas on slip of paper * Hand in paper at end of period * Hand in worksheet | * Hand out a slip of paper to each table * Ask them to write down as many really large or really small quantities they can think of that could be expressed using scientific notation * Collect paper at end of period * Collect worksheet | I want to know what topics my students associate with scientific notation so that I can try to include them in upcoming starters and activities. |