Please denote which exceptional category your response applies to (mild/moderate, gifted, hearing impaired, etc.) before pasting your drafted response.

Example- Mild/Moderate (Megan Williams)

Describe the student you will be teaching:
-age/grade/developmental level
-exceptionality
-strengths/needs

Mackenzie is a 14-year-old 8th grade student. Developmentally she is age-appropriate. She qualifies for Exceptional Children's Services in the category of Specific Learning Disability in math reasoning and math calculation. She reads and comprehends at grade level, and she is an active participant in math class. She takes good notes and attends extra tutoring when she does not understand a concept. She is a motivated learner, but needs consistent preteaching/reteaching of math concepts in order for them to become automatic for her.

Describe ONE important concept or skill related to ("measurement"/numeracy skill) you would include in this lesson (target concept/skill):

This lesson in particular will focus on measuring how much liquid a cone will hold (ie: volume of a cone). This lesson will include learning the formula given the dimensions of height, radius and/or diameter.

Describe TWO Instructional activities you would use to teach this concept/skill:
https://activitytypes.wm.edu/MathLearningATs-Feb2011.pdf (for reference in case anyone wants it)
Describe TWO Instructional resources (including technology):
https://www.mathteaching.org/math-teacher-resources-lesson-plans-games-more/ (for reference in case anyone wants it)

Explain how the activities AND resources would be particularly effective for this particular student:

Explain how you would measure the student's success:

I would begin the lesson with a quick assessment reviewing finding the volume of a cylinder (taught previously). I would have Mackenzie answer questions on a white board because the feedback is immediate, and I can correct any mistakes in thinking before moving on. Next, I would use a 3-dimensional cone and cylinder with the same diameters and heights, and would have Mackenzie guess how many full cones of water it would take to fill the cylinder. I would ask her to explain her reasoning for her guess, and then I would have her physically test it out. She would find out that it takes three cones' worth of water to fill up the cylinder. I would then ask her how we could apply that knowledge to devising a formula for finding the volume of a cone, based on the formula for finding the volume of a cylinder. Through discussion, I would lead her

to the realization that if the formula for the volume of a cylinder is V = pi x r squared x h, then the formula for the volume of a cone with the same dimensions would be ⅓ of that. To solidify this concept, I would have Mackenzie write a paragraph explaining this concept in her notebook, and would ask her to draw a picture that models it as well. Because Mackenzie is very verbal, forcing her to put things in written form really helps her think about math concepts in ways that stick with her better. I would then have her do four cone problems on the whiteboard, so that I could make sure that she understood what to do if given the radius vs. the diameter, and vice-versa. When she had correctly completed those, I would then transition her to IXL where I would have assigned the corresponding activity. IXL is an online program that is especially good for students like Mackenzie, as it gives only one problem at a time (she tends to get overwhelmed if she thinks there are too many problems). It's also ideal because students earn points for each problem they get correct, and the problems get progressively more difficult. The goal is for the student to get a "Smart Score" of at least 80. This is great because kids who understand a concept right away can demonstrate their mastery quickly, while kids like Mackenzie are encouraged to keep going and receive the amount of practice that is right for them. As the teacher, I can see on the dashboard how long the kids are spending per subject, and also the percentage of correct/incorrect answers. At the end of the lesson, I would measure Mackenzie's success with an exit ticket; three cone problems and one cylinder problem on a half-sheet of paper (I would want to assess if she knew to use the different formulas for the different shapes). I like to use paper for these so I can see the students' work, and I can take it home to help sort out groups for the next day.