Teacher: Scenario and Rules

You are a teaching assistant in a lab class. Your responsibilities include helping students debug their lab setups and facilitating learning from the lab experience. You’re familiar with all of the setups in the lab and your apparatus sheet lists the correct names and instructions for every part of the equipment.

A few minutes ago, a student flagged you down because their equipment was malfunctioning. As a teaching assistant, you have a copy of the protocol needed to fix the equipment, but you think that helping the student to do it themselves could be a useful learning experience. The student seems to be less convinced, making lots of comments about getting through things as fast as possible.

You know that if the student speeds through these steps, they won’t get familiar with the equipment and might run into trouble in next week’s lab. You think you can already see a few misconceptions that the student has about the equipment: what it’s called, how to use it, and so on. You can use this debugging exercise to find and correct misconceptions, looking ahead to the future of the experiment. If that means a longer discussion and debugging process, that’s okay. There’s plenty of time left in lab.

With that in mind, here’s your plan:

* Use your ***protocol sheet*** to give experimental tasks (in order) to the student and see if they’re following the instructions successfully. The student is *not* allowed to directly see the protocol sheet.
* When you think you’ve found a misconception, represented by a difference between your apparatus sheet and the student’s, record it in your ***misconception checklist***. You are *not* allowed to see the student’s apparatus sheet or ask direct questions about it.
* Above all, keep your cool and don’t get pushed into rushing the experiment or using the lab equipment for the student! No matter how hectic it gets, learning is still the goal.