

Possible solutions to the first WCI assessment

For many lab-based WCI assessments, it should be noted that there is not always one correct answer for a given challenge. For instance, in our experience with the Glass Tube Lab assessment (Figure 2, p. 41), each class tends to come up with a unique approach to making the ammonium chloride precipitate form closer to the ammonia cotton swab. One class may base its approach on data obtained by a group that examined the effect of hydrochloric acid concentration on the ring's location. Another class may focus on data obtained by a group that explored how changing the insertion time of each cotton swap impacted the ring's location. And yet another may look at the data from several groups, and then develop its approach upon the class's collective data. Each class develops a unique approach because it has previously collected data from a unique set of up to six group experiments.

Over the years, we have noticed that over half of our classes typically choose an approach that allows them to succeed in accomplishing a given WCI assessment challenge. These classes tend to be the ones that strongly ground their approach in data the class had already collected. Whatever challenge we choose to create we attempt to solve ourselves before assigning it to the class. By doing so, we have a better understanding of the class's potential discussions and approaches. Overall, it is most exciting when a class comes up with a way to solve the problem that we have not seen before. In these instances, we learn alongside our students.