

12<sup>th</sup> Math Stats  
Pre-Interview

Interviewer: Why'd you choose to teach this lesson?

Teacher: I chose to teach this lesson because significance testing, confidence intervals, students get kind of confused between the two: What does it mean to be a true proportion and what does it mean to be a true value. Statistics is a very esoteric concept in math, and it involves a lot of writing. With AP Statistics, they're going to be doing the test soon, they're going to have to justify every single step that they do, and what better than to do a hands-on activity?

Interviewer: What are the learning outcomes for this lesson? How are they related to the larger sequence?

Teacher: Learning outcomes are to experience a study and go through the steps of collecting data, identifying null-alternate hypotheses, and then eventually getting the data and figuring out 95% confidence intervals. It pretty much combines a lot of the units that they've been working on so far, and since we're hitting the end of the year soon. They need to be seeing where everything fits together.

Interviewer: How would you describe the lesson as meaningful, useful, or relevant for students' lives?

Teacher: I really think that everything is meaningful, I would say. It's just that getting students to understand how to ask a question, why to ask a question, and how to actually get answers to that question, is meaningful in anything that you do, and that thought process, the engineering process of that is important; so this lesson will include going through a study that has been done, and then eventually turning around creating your own study, something that would be measurable, and that they could give to someone, and have that implemented to see if they really fully understand what a study is.

Interviewer: What's that context of the study?

Teacher: The context of the study right now, we're going to be doing ... Do Hershey's Kisses fall on their flat side, and how often do they fall on their flat side if you're dropping it from a distance? Do different Hershey's, maybe we're going to talk about if different Hershey's types fall differently? Because I have cookies, and cream Hershey's, and regular, so ... We'll see if it works. It's kind of ... Yeah.

Interviewer: What are the big questions you're using to drive student discussion?

Teacher: Big questions that I'm using are null and alternate hypotheses, what does a 95% confidence interval look like, and does it fall within the null hypothesis.

Interviewer: How are you, plan to check for student understanding and assess student outcome?

Teacher: I'll be doing formative assessment throughout the lessons. Since they're working in small groups, I'll be able to walk around, talk to them, see what they're doing, and eventually, that final assessment for them would be to create their own study using the information that they have been doing this entire day.

Interviewer: How would you describe the lesson as engaging for students?

Teacher: I think most students are engaged when it comes to food, honestly. It's that little carrot at the end, that they can eat the experiment that they're working on, but also that they are really prepping for this AP test, and to understand the test is not just to answer the questions of the test, but to be able to write the test as well. Because once you're writing, [ask 00:03:19] like any teacher, you've got ... You get the concept a lot better; so that's what I'm hoping to do, is to turn it around on them. Have them experience something, go through the motions, figure out what they liked, what they didn't like, and then turn around and give it to someone else.

Interviewer: How do you plan to manage student behavior throughout the lessons, starting with expectation?

Teacher: Well, student behavior at AP class is really standing on the shoulders of giants, because all the teachers, since their kindergarten here, have been fostering appropriate self-management, and I don't expect there to be that many problems, but redirection's always key. We do have some students who are ADHD and otherwise, and it's important to just redirect, free focus, have them know what the end goal is, and sometimes just time checks: "Remember, we have 10 minutes left, can you ... " "Let's keep going for 10 minutes, we'll have a break," and so forth.

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