WESTSIDE HIGH SCHOOL

Level Up: RISE to Your Potential

24-25 Lesson Plan Template Teacher: COACH BARROW Subject: ON RAMPS STATISTICS

Week of: NOVEMBER 18	Monday	Tuesday	Wed./Thurs.	Friday
TEKS	**1(G)** Display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. **6(A)** Explain how a sample statistic and a confidence level are used in the construction of a confidence interval.	**1(G)** Display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. **6(A)** Explain how a sample statistic and a confidence level are used in the construction of a confidence interval.	**1(E)** Create and use representations to organize, record, and communicate mathematical ideas **6(G)** Construct null and alternative hypothesis statements about a population parameter	**1(G)** Display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. **6(A)** Explain how a sample statistic and a confidence level are used in the construction of a confidence interval. **6(G)** Construct null and alternative hypothesis statements about a population parameter.
Learning Objective	Students will be able to predict the effect of sample size, confidence level, and standard deviation on the margin of error and calculated confidence interval.	Students will be able to interpret a confidence interval in the context of the data.	Students will be able to write the hypothesis for a one-sample *t*-test using appropriate notation AND perform a one-sample *t*-test and use a critical value and *p*-value to refute	**UT QUIZ 4**

			a claim.	
Higher Order Thinking Questions	Discuss how the sample size and variability of the data may impact the precision of the confidence intervals and the conclusions drawn.	If you were tasked with improving the confidence interval's precision, what strategies would you suggest (e.g., sample size, variability, confidence level), and how would those strategies influence the margin of error?	How would you interpret the p-value and the test statistic in the context of this problem? What assumptions must be met for this test to be valid, and how might violations of these assumptions affect the results?	**UT QUIZ 4**
Agenda	1. **WAG** 2. **4.1 ESTIMATING THE MEAN** 3. **LESSON CHECK 4.1**	1. **HOMEWORK 4.1** 2. **4.2 ONE SAMPLE T-TEST**	1. **ONE SAMPLE T-TEST HAND CALCULATION** 2. **LESSON CHECK 4.2** 3. **HOMEWORK 4.2**	**UT QUIZ 4**
Demonstration of Learning	**The bags list the weight of the chips to be 42.5 grams. Does your confidence interval support or refute this claim? EXPLAIN!**	**Based on the the car owner found, does their evidence support or refute the claim from the manufacturer that the car gets 25 mpg? EXPLAIN!**	**If you were to compute the 95% confidence interval for the new test with 200 pilots. Would the null hypothesized value of 8 hours be contained in this interval or not? EXPLAIN!**	**UT QUIZ 4**
Intervention & Extension	RSTUDIO SHINY APP 4.1	RSTUDIO SHINY APP 4.2	RSTUDIO SHINY APP 4.2	
Resources	UT CANVAS/RSTUDIO	UT CANVAS/RSTUDIO	UT CANVAS/RSTUDIO	UT CANVAS/RSTUDIO