

Group Members: \_\_\_\_\_

Period: \_\_\_\_\_

**Laser One Project PRESENTATION Scoring Rubric**

*Completed Presentation due 4/30/18*

Criteria	4- Exceeds Standards (A+, A, A-)	3- Meets Standards (B+, B, B-)	2- Approaching Standards (C+, C, C-)	1- Below Standards (D or lower)
<b>Scorecard Data Entry Completion</b>	All members of the group that were present on the field trip submitted their scorecard data to the "Individual Laser Tag Data Entry Form".	No more than 3 members of the group that were present on the field trip submitted their scorecard data to the "Individual Laser Tag Data Entry Form".	No more than 2 members of the group that were present on the field trip submitted their scorecard data to the "Individual Laser Tag Data Entry Form".	1 or no members of the group that were present on the field trip submitted their scorecard data to the "Individual Laser Tag Data Entry Form".
<b>Research Question Submission</b>	The group submitted a proposed research question, identified one item of data from the scorecard that was linked to the research question, and created a question for a potential survey. <i>Submission was completed by 3:00 pm on 3/29/18.</i>	The group submitted a proposed research question, identified one item of data from the scorecard that was linked to the research question, and created a question for a potential survey. <i>Submission was completed within 24 hours after 3:00 pm on 3/29/18.</i>	The group submitted a proposed research question, identified one item of data from the scorecard that was linked to the research question, and created a question for a potential survey. <i>Submission was completed more than 24 hours after 3:00 pm on 3/29/18.</i>	The group failed to submit a research question.
<b>Research Question &amp; Hypothesis</b>	The group has presented their assigned research question and hypothesis.	The group is missing either the assigned research question or the hypothesis.		The group has not presented both their research question and hypothesis.
<b>Anonymous Student Survey Submission</b>	The group created a survey via google docs that was anonymous, included a question for student number, and appropriately asked a specific question that would assist in their group-assigned research question. <i>Submission was completed by 3:00 pm on 4/9/18.</i>	The group created a survey via google docs that was missing 1 of the required elements or 1 error was present in the survey. <i>Submission was completed within 24 hours after 3:00 on 4/9/18.</i>	The group created a survey via google docs that was missing more than 1 of the required elements or more than 2 errors were present in the survey. <i>Submission was completed more than 24 hours after 3:00 pm on 4/9/18.</i>	The group did not create a survey.
<b>Data Analysis (Mean, Median, Mode)</b>	The group has presented the correct mean, median, and mode of both samples in their study.	The group was missing no more than one of the 3 criteria.	The group was missing no more than two of the 3 criteria.	The group was missing all 3 required elements.
<b>Data Analysis (Stem-and-Leaf Plot)</b>	The group has presented both samples in their study as a correct stem-and-leaf plot with a key.	The group has presented both samples in their study as a correct stem-and-leaf plot but is missing a key.	The group has presented both samples in their study as a correct stem-and-leaf plot with a key but there are a few errors.	The group did not provide a stem-and-leaf plot for both samples.
<b>Data Analysis (Histogram)</b>	The group has presented both samples in their study as a correct histogram with the axes labeled appropriately.	The group has presented both samples in their study as a correct histogram but at least one label is missing.	The group is missing one histogram or has both histograms with a few errors.	The group did not provide both histograms
<b>Data Analysis (Box-and-Whisker Plot)</b>	The group has presented both samples in their study as a correct box-and-whisker plot with an appropriate scale.	The group has presented both samples in their study as a correct box-and-whisker plot but it is missing no more than one key element.	The group has presented both samples in their study as a correct box-and-whisker plot but it is missing more than one key element.	The group did not provide both box-and-whisker plots.

<b>Data Analysis</b> (Comparing two sets about the median)	The group correctly compared the two samples by comparing their shape, outliers, center, and spread.	The group correctly compared the two samples but is missing no more than 1 key element.	The group compared the two samples but there are errors in the comparison	The group failed to compare the two sets of data.
<b>Data Analysis</b> (Comparing Spread about the mean)	The group correctly computed the standard deviation and variance to correctly compare the two samples about the mean.	The group correctly computed the standard deviation and variance to correctly but did not compare the two samples about the mean.	The group has made errors in calculating the standard deviation and variance.	The group did not state the standard deviation and variance for both samples.
<b>Data Analysis</b> (Normally Distributed using Empirical Rule)	The group correctly used the empirical rule to establish whether both samples were approximately normal or not.	The group correctly determined if the two samples were approximately normal or not but did not state all 3 conditions of the empirical rule.	The group incorrectly determined if the two samples were approximately normal or not.	The group did not use the empirical rule to establish whether or not both samples were approximately normal.
<b>Data Analysis</b> (Normally Distributed using a Normal Probability Plot)	The group correctly used a Normal Probability Plot to establish whether both samples were approximately normal or not. The Normal Probability Plot is provided with axes labeled appropriately.	The group correctly determined if the two samples were approximately normal or not but the plot has errors.	The group incorrectly determined if the two samples were approximately normal or not.	The group did not provide a Normal Probability Plot.
<b>Data Analysis</b> (Confidence Interval)	The group has provided a correct 2-sample t-interval for means and has correctly interpreted its meaning in the context of their research question. If there was not enough evidence to conclude a difference, the group reflected on ways to conduct a future experiment that would maximize the likelihood of the results being statistically significant.	The group has provided a correct 2-sample t-interval for means but has interpreted it incorrectly.	The group has provided an incorrect 2-sample t-interval for means.	The group has not provided a confidence interval.
<b>Presentation Elements</b>	The presentation had the following elements: Title Page, Introduction of Research Question, Data Analysis & Findings, and Conclusions.	The presentation is missing no more than 1 key element.	The presentation is missing no more than 2 key elements.	The presentation is missing more than 2 key elements.
<b>Group Member Presentation Participation</b>	Each member of the group presentation participated an equal amount.	The member participation of the presentation varied slightly.	One member of the group did most of the talking.	No one presented.
<b>Appropriate Terminology</b>	Student frequently incorporates appropriate mathematical terminology in their findings. The writing is clear and appropriate for the audience.	Student incorporates appropriate mathematical terminology in their findings. There are minor instances when terminology should be incorporated and it is not. The writing is mostly clear and appropriate for the audience.	Student incorporates appropriate mathematical terminology in their findings. There are one to two major instances when terminology should be incorporated and it is not and/or it is used incorrectly. The writing is unclear at points and requires inferring on the part of the audience.	Student responses show no attempt to use math terminology appropriately and/or writing is extremely unclear.