## Oak Hills 2024 STEM Expo

**Traditional Science Project Scoring Rubric** 

Grade:	Project Number:
Project Name:	

	4	3	2	1
Investigative Process	Experiment aims to answer an original question     Hypothesis is formulated with critical reasoning     Variables to be manipulated are evidence based	Experiment aims to answer a common question with an innovative idea     Hypothesis is formulated with logical reasoning     Variables to be manipulated are identified with some criteria	Experiment lacks original thought but aims to answer a question     A hypothesis is present     Variables are identified but lack clear explanation of why they are being manipulated	Experiment does not aim to answer a question, or the investigation does not match with the question identified     A hypothesis is not present or does not address outcomes     Variables are not identified or variables are identified with little or no understanding of why
Research	Research provides a real world context for experiment     Information gathered provides clear experimental direction     Resources/bibliography cited appropriately	Research provides context for experiment     Information gathered relates to experimental direction     Resources/bibliography cited	Evidence that some research has occurred, but it does not provide experimental context     Information gathered is unclear or disconnected from experiment     Minimal resources/bibliography	Research is lacking or does not align with experimental context     Unclear that background information was gathered     Resources/bibliography absent
Procedure	Procedure is clearly outlined Procedure follows a logical sequence Multiple trials conducted over time Materials used were clearly communicated	Procedure is outlined Procedure follows a sequence Multiple trials were conducted Materials used were communicated	Procedure is unclear Procedure is not sequenced Multiple trials were not conducted Materials used were not clearly communicated	Procedure is not included  Multiple trials were not conducted  Materials list not included
Presentation of Results	Data displays are clearly labeled     Data displays are easily understood     Data collection was precise     Data collected was appropriate to investigation (qualitative vs. quantitative)     Sample size was appropriate     Logbook was used with fidelity	Data displays are labeled     Data displays are understandable     Data collected was appropriate to investigation (qualitative vs. quantitative)     Sample size needed adjustment     Logbook was used	Data displays are minimally labeled     Data displays are understood with some explanation     Data collected was not appropriate to investigation (qualitative vs. quantitative)     Sample size was not considered     Logbook was present	Data displays are not present     Logbook was not used
Student Understanding	Student analysis of experimental results is clear     Student is able to discuss data and draw conclusions back to research     Depth of understanding is present     Student is anticipating further investigations to be conducted and/or research ideas	Student analysis of experimental results lacks clarity     Student is able to discuss data and draw conclusions but connections back to research are weak     Student is able to identify possible further investigations through discussion with judges	Student analysis of experimental results is weak     Student discussion of data shows lack of clarity     Conclusions are not connected to research     Student is minimally able to identify possible further investigations through discussion with judges	Student analysis of experiment results is weak and lacks understanding     Student understands the experiment as a one time investigation
Additional comments:				Total points: