**VT STEM Fair Science Rubric March 25, 2023**

**10% - Abstract**

Abstract

Abstract is coherent, error free and summarizes background, methods, results, conclusions and significance in 250 words or less.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

**20% - Research Question**

Background

Background research organizes information from various sources into a coherent summary and includes references.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

Question/Hypothesis

Question/Hypothesis is testable, focused and includes cause and effect relationships.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

**20% - Methods**

Quality of Description

Methods are ordered logically, provide repeatable instructions and makes use of appropriate graphics.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

Suitability

Methods are well suited to address research question and include controls and quantitative observations from multiple trials where appropriate.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

**20% - Results**

Visual Summary

Data are appropriately represented in figures, tables, etc. with a quantitative summary and correct terminology, titles, labels, units and scale.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

Analysis

Data analysis identifies relationships between independent and dependent variables and relates to question and prediction. Analysis includes statistical summaries and comparisons where appropriate for project and student level.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

**(turn over to continue scoring)**

**20% - Interpretation/Discussion/Conclusions**

Interpretation

The meaning of the results and possible errors/shortcomings is discussed in the context of relevant background information.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

Conclusion

The conclusion summarizes the overall result in the context of the question/hypothesis.

Range: 1 – 5 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10% - Technical**

Student Level

Technical level of project was appropriate for age/grade

Range: 0 – 2 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

 Completeness

All required elements were included: (a) Title (b) Abstract (c) 1-page Quad Chart and (d) Presentation with Research Question, Methods, Results, Interpretation/Discussion and Conclusion sections.

Range: 1 – 3 Score: **\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Total: \_\_\_\_\_\_\_\_\_\_\_\_\_**