



Scientific Inquiry

Judging Evaluation Form - TCSOS

Name _____

Grade _____

The Scientific Inquiry is the basic experimentation category. The items pertaining to this category cover Scientific Methodology, Research, Hypothesis, Experiment Design, Data Collection and Analysis.

General – 70% (notebook)

Circle Score

The purpose or problem clearly explains what is going to be experimented	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Appropriate and complete research was conducted	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Hypothesis shows a relationship between independent and dependent variables	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Procedure description shows what observations will be made, what data will be collected, defines the number of trials, lists independent and dependent variables and control	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Procedure is sequential, replicable, provides a control and variables and was repeated for validity.	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Qualitative (observations) and quantitative (recorded data) observations are used and recorded.	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Record of experiment includes observations, appropriate use of terms and measurement, analysis and reflections	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Conclusion relates to the problem statement and incorporates results/the data supports or doesn't support the hypothesis, lists possible sources of error, and unresolved questions	0 1 ○ 2 ○ 3 ○ 4 ○ 5

Visual – 30% (display)

Display is attractive, easy to read, and layout is in appropriate logical order	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Describes how/why the inquiry was formed and development of a hypothesis	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Investigation procedure is clearly explained on display and in <u>abstract</u>	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Materials listed with units of measure (consistently), graphs, data tables etc. labeled correctly, data is summarized	0 1 ○ 2 ○ 3 ○ 4 ○ 5
Results/Summary of data is clearly stated and addresses ALL variables	0 1 ○ 2 ○ 3 ○ 4 ○ 5

Additional Items for Consideration

Comments(use back if needed)

The scientific method shows completeness of thought and cause and effect are clearly explained	
The Inquiry relates to broader scientific principles, real world applications	
The idea for investigation is original or innovative	
The procedure, materials, trial length, etc. are innovative or creative in approach	

Evaluation value approximations: 0: Not Demonstrated, 1: Beginning, 2: Developing, 3: Average, 4: Accomplished, 5: Advanced

Adapted from Placer County STEM Expo