

Manitoba Schools Science Symposium

Judges Marking Sheet

PART A: SCIENTIFIC THOUGHT – 45% (Award <i>one mark</i>, to a maximum of 45)			Mark
<p style="text-align: center;">Experiment</p> <p>An investigation undertaken to test a scientific hypothesis experimentally. The variables, if identified, are controlled to some extent.</p>	<p style="text-align: center;">Innovation</p> <p>The development and evaluation of innovative devices, models or techniques or approaches in technology, engineering or computers (hardware or software).</p>	<p style="text-align: center;">Research / Study</p> <p>A collection and analysis of data to reveal evidence of a fact or a situation of scientific interest. It could include a study of cause and effect or theoretical investigations of scientific data.</p>	
Fair: Max 30			
<p><i>Duplicate a known experiment to confirm the hypothesis. The hypothesis is very predictable.</i></p>	<p>Build models (devices) to <i>duplicate existing technology.</i></p>	<p><i>Study existing printed material related to the basic issue. Use a limited number of sources.</i></p>	
Good: 31 - 35			
<p><i>Use multiple experiments or replications of the same test to strengthen the study. Identify and control most of significant variables.</i></p>	<p>Make <i>improvements to</i> or demonstrate new applications for <i>existing technological systems or equipment</i> and justify them.</p>	<p>Study material collected through a <i>compilation of existing data and personal observations.</i> Understands some applications of knowledge.</p>	
Very Good: 36 - 40			
<p><i>Extend a known experiment and use multiple experiments. Carry out significant analysis using graphs or simple statistics. Shows command of technique and skill.</i></p>	<p><i>Design and built innovative technology</i> or provide <i>adaptations to existing technology</i> that will have human benefit and/or economic applications.</p>	<p>Carry out a study based on observations and literary research <i>illustrating various options for dealing with a relevant issue. Include appropriate analysis</i> (arithmetic, statistical, or graphical).</p>	
Excellent: 41 - 45			
<p>Devise and carry out an <i>original experiment. In-depth analysis</i> of results with <i>strong understanding of the scientific method.</i> Shows great command of technique and skill. <i>High difficulty level for grade level.</i></p>	<p><i>Integrate several technologies, inventions or designs</i> and construct an innovative technological system that will have human and/or commercial benefit.</p>	<p>Correlate information from a variety of significant sources, which may <i>illustrate cause and effect or original solutions to current problems through synthesis.</i> Includes appropriate in-depth analysis.</p>	

NOTE: As we move down the levels, *we must also factor in the level of difficulty* of both the content material and the experimental design relative to the age and grade level of the student. Ultimately, the elements above and this last point must be synthesized, and then, the **project compared with the others in the category being examined**, before a final mark is awarded. This is where the judge's expertise, experience, and discretion become invaluable.

PART B: ORIGINALITY and CREATIVITY – 25% (Award one mark to a maximum of 25)							
Rank 1 (fair) Mark Range 5 to 10		Rank 2 (good) Mark Range 10 to 15		Rank 3 (very good) Mark Range 15 to 20		Rank 4 (excellent) Mark Range 20 to 25	
Little imagination shown. Project design is simple with minimal student input. A textbook-type project.		<i>Some creativity shown in a project of fair to good design. Standard approach using common resources or equipment. Topic is a common one.</i>		Imaginative project, good use of available resources. Well thought out, above ordinary approach. Creativity shown in design and/or use of materials.		<i>A highly original project or a novel approach. Shows resourcefulness and creativity in design, use of equipment and/or construction of project. Project represents new research in the field.</i>	
Mark							

**PART D: KNOWLEDGE
Maximum 10 Marks**

**PART C: DISPLAY & COMMUNICATION
Maximum 20 Marks**

	Max	Mark
Layout logical and self-explanatory.	3	
Neatness, grammar and spelling.	3	
Display accurately reflects the project.	2	
Exhibit well constructive and attractive.	2	
The information is presented clearly with continuity.	4	
The oral summary accurately reflects the project.	2	
Enthusiastic presentation.	4	
Total Display Mark	20	

	Max	Mark
Student demonstrates excellent knowledge of the project.	3	
Student demonstrates adequate knowledge of the field.	2	
The student is able to answer questions adequately.	3	
Material prepared independently.	2	
Total Presentation Mark	10	

TOTAL SCORE		
Part A: Scientific Thought	45	
Part B: Originality and Creativity	25	
Part C: Display & Communication	20	
Part D: Knowledge	10	
Total Mark awarded to this project	100	

Initials _____