Grade 5- Science Fair Rubric

Report Card Stem	**Program of Studies Outcomes**	**4 Excellent**	**3 Good**	**2 Basic**	**1 Not meeting minimum expectations**
HUMANITIES: Manages and evaluates information and ideas	Identify and develop a plan for gathering information and formulating questions to guide research.	Adjusts plan to gather information and formulates specific questions for an intended purpose.	Develops a plan to gather information and formulates questions to guide research.	Use a familiar plan and ask questions to gather information and to guide research.	Use a familiar plan to gather information for research.
HUMANITIES: Writes to develop, organize and express information and ideas	Evaluate Sources- Determine the usefulness and relevance of information for research purpose and focus	Sources are relevant, properly cited and arguments are well-supported within scientific writing.	Sources are mostly relevant, cited in the bibliography and are appropriately chosen and matched to the topic.	Sources are sometimes relevant and may or may not be cited in the text or bibliography. Additional sources are needed and are not always matched to the topic.	Sources are mostly irrelevant or missing and do not support the topic/ argument.
HUMANITIES: Constructs meaning and makes connections through speaking	**Present information** Organize ideas and information in presentations to maintain a clear focus and engage the audience Use effective oral and visual communication- adjust volume, tone of voice and gestures to engage the audience; and focus audience attention	Skillfully reports on the chosen topic with many appropriate facts, vocabulary and relevant descriptive details. Fluctuates volume and inflection to maintain audience interest and to emphasize key points.	Recounts an experience with topic providing appropriate facts and relevant details. Speech is audible and clear throughout the presentation.	Recounts an experience or topic with limited detail and/or recall. Speech may be inaudible, monotone or unclear during at least one part of the presentation.	Description of topic is minimal with few details. Speech is mostly inaudible and/or unclear.
SCIENCE: Develops skills for inquiry and communication	**Skills: Focus QUESTIONS** Ask questions that lead to exploration and investigation	Independently identifies key questions and can explain both the relevance and purpose of the questions asked.	Identifies questions and reflects on the relevance of the questions.	With guidance, can create a few questions that are linked to the topic.	With significant support, is able to identify one or more questions related to the topic.

SCIENCE: *Develops skills for inquiry and communication*	**Skills: Evaluate RESEARCH** Plan and carry out procedures that comprise a fair test Identify variables: identify the variable to be manipulated; identify variables to be held constant; identify the variable that will be observed (responding variable) Select appropriate materials and identify how they will be used Modify the procedures as needed	Identified a substantial problem related to a specific field of science Developed comprehensive and testable question to investigate Developed a comprehensive plan and procedure using realistic tools and methods for collecting data and information	Identified a challenging problem related to specific field of science. Developed relevant testable question to investigate independently. Developed a substantial plan and procedure using relevant tools and methods for collecting data and information.	Identified a basic problem related to a general field of science. Developed simplistic testable question to investigate with direction. Developed a basic plan and procedure using simplistic tools and methods for collecting data and information.	Problem not clearly identified and testable questions are underdeveloped. Teacher provided or heavily directed development of a testable question. Plan and procedure are not fully developed. Realistic tools and methods are not identified.
SCIENCE: *Develops skills for inquiry and communication*	**Skills: Reflect & Interpret CONCLUSION** Evaluate procedures used and identify possible improvements State an inference, based on results. The inference will identify a cause and effect relationship that is supported by observations Identify possible applications of what was learned Identify new questions that arise from what was learned	Clearly stated and well supported conclusions with reasonable alternate explanations for results. Sources of error that may impact results are identified and explained, potential flaws with design addressed in detail.	Clearly stated conclusion supported by results. Shows an attempt at alternate explanations. Sources of error that would impact results were identified, potential flaws with design identified.	States a conclusion which is not supported by data, offers no alternate explanation. Sources of error that would not impact results were identified, potential flaws with design not identified.	Limited understanding of data based conclusion. Sources of error and flaws in design not identified.

Grade 6- Science Fair Rubric

Report Card Stem	**Program of Studies Outcome**	**4 Excellent**	**3 Good**	**2 Basic**	**1 Not meeting minimum expectations**
HUMANITIES: Manages and evaluates information and ideas	Distinguish among facts, supported inferences and opinions.	Explains the interrelationships between facts, inferences and opinions	Explains how facts are used to support inferences and form opinions.	Identifies the difference between facts, inferences and opinions.	Identifies facts and opinions.
HUMANITIES: Writes to develop, organize and express information and ideas	Record Information- Make notes on a topic, combining information from more than one source; use reference sources appropriately.	Note-taking is clear and organized and demonstrates paraphrased information in the student's own words. Sources are relevant, properly cited and arguments are well-supported within scientific writing	Note-taking is mostly clear and generally organized and paraphrased. Sources are current/relevant, cited in the bibliography and are appropriately chosen and matched to the topic	Note-taking lacks organization and is not always written in the student's own words. Sources are sometimes relevant and may or may not be cited in the text or bibliography. Additional sources are needed and are not always matched to the topic.	Note-taking is missing or is not written in the student's own words. Sources are mostly irrelevant or missing and do not support the topic/ argument.
HUMANITIES: Constructs meaning and makes connections through speaking	**Present Information** Use a particular style and form of presentations, appropriate for content, audience and purpose. **Enhance Presentation** Emphasize key ideas and information to enhance audience understanding and enjoyment.	Skillfully reports on the chosen topic with many appropriate facts, vocabulary and relevant descriptive details. Actively maintains audience interest and clearly emphasizes key points.	Recounts an experience with topic providing appropriate facts and relevant details. Key points are outlined and audience is generally engaged. Most information is relevant to the topic/ form of the presentation.	Recounts an experience or topic with limited detail and/or recall. Some key points are outlined. At times the presentation may be unclear/ irrelevant.	Description of topic is minimal with few details. Presentation is unorganized and is mostly unclear or difficult to follow.

SCIENCE: *Develops skills for inquiry and communication*	**Skills: Focus** **QUESTIONS** Ask questions that lead to exploration and investigation. Identify one or more possible answers to questions by stating a prediction or a hypothesis.	Independently identifies key questions and can explain both the relevance and purpose of the questions asked.	Identifies questions and reflects on the relevance of the questions.	With guidance, can create a few questions that are linked to the topic.	With significant support, is able to identify one or more questions related to the topic.
SCIENCE: *Develops skills for inquiry and communication*	**Skills: Evaluate** **RESEARCH** Plan and carry out procedures that comprise a fair test. Identify variables: identify the variable to be manipulated; identify variables to be held constant; identify the variable that will be observed (responding variable). Select appropriate materials and identify how they will be used. Modify the procedures as needed.	Identified a substantial problem related to a specific field of science. Developed a comprehensive and testable question to investigate. Developed a comprehensive plan and procedure using realistic tools and methods for collecting data and information.	Identified a challenging problem related to specific field of science . Developed a relevant testable question to investigate independently. Developed a substantial plan and procedure using relevant tools and methods for collecting data and information.	Identified a basic problem related to a general field of science. Developed a simplistic testable question to investigate with direction. Developed a basic plan and procedure using simplistic tools and methods for collecting data and information.	Problem not clearly identified and testable questions are underdeveloped. Teacher provided or heavily directed development of a testable question. Plan and procedure are not fully developed. Realistic tools and methods are not identified.
SCIENCE: *Develops skills for inquiry and communication*	**Skills: Reflect & Interpret** **CONCLUSION** Evaluate procedures used and identify possible improvements. State an inference, based on results. The inference will identify a cause and effect relationship that is supported by observations. Identify possible applications of what was learned. Identify new questions that arise from what was learned.	Clearly stated and well supported conclusions with reasonable alternate explanations for results. Sources of error that may impact results are identified and explained, potential flaws with design addressed in detail.	Clearly stated conclusion supported by results an attempt at alternate explanations. Sources of error that would impact results were identified, potential flaws with design identified.	States a conclusion which is not supported by data, offers no alternate explanation. Sources of error that would not impact results were identified, potential flaws with design not identified.	Limited understanding of data based conclusions. Sources of error and flaws in design not identified.

Grade 7- Science Fair Rubric

Report Card Stem	Program of Studies Outcome	4 Excellent	3 Good	2 Basic	1 Not meeting minimum expectations
HUMANITIES: *Manages and evaluates information and ideas*	Focus on topics and select sources of information when considering purpose.	Accesses quality sources and analyzes the appropriateness of gathered information when considering topics, audience and purpose.	Focuses on topics and selects specific sources when considering audience and purpose.	Develops topic and identifies sources when considering audience and purpose.	Identifies a topic and finds related information.
HUMANITIES: *Writes to develop, organize and express information and ideas*	**Organize information-** Organize ideas and information by selecting or developing categories appropriate to a particular topic and purpose. Produces print media text with well-developed and well linked sections and ideas. **Record Information-** Make notes, using headings and sub headings appropriate to a topic. Reflects on ideas and information to form own opinions with evidence to support them.	Information is clearly organized using headings and subheadings appropriate to the topic. All ideas are fully supported with research to justify the viewpoint or opinion.	Information is mostly organized using headings that match the topic. Ideas are generally supported with research to explain the viewpoint or opinion.	Information is somewhat organized into paragraphs and/or headings. Some ideas lack supporting evidence or are irrelevant to the viewpoint or opinion.	Information is generally disorganized and lacks paragraphs and headings. Ideas lack supporting evidence or are missing/ irrelevant.
HUMANITIES: *Constructs meaning and makes connections through speaking*	**Present information-** Present ideas and opinions confidently. **Enhance presentation-** Clarify and support ideas or opinions with details, visuals or media techniques.	Consistently and confidently asserts an opinion and is able to support it with evidence. Consistently employs a varied range of descriptive, informative and rich vocabulary appropriate to the purpose, message, audience	The student frequently asserts an opinion and is able to support it with evidence. Frequently uses a range of subject- specific vocabulary appropriate to the purpose and audience.	With prompting, the student sometimes asserts an opinion and support with evidence. Uses some subject-specific vocabulary and can match vocabulary to the purpose and audience when prompted.	The student seldom asserts an opinion. The student requires support to use appropriate vocabulary.
SCIENCE: *Develops skills for*	**Skills: Initiating and Planning QUESTIONS**	Identifies a significant and relevant problem	Identifies a challenging problem related to a	Identifies a basic problem related to a	Problem is not clearly identified.

inquiry and communication	Identify questions to investigate. Define and delimit questions to facilitate investigation. State a prediction and a hypothesis based on background information.	related to a specific field of science. Develops a comprehensive and testable question to investigate. Background research is integrated into the formation of the problem or hypothesis and recommends an approach to solving a given problem, based on findings.	specific field of science, Develops a relevant testable question to investigate independently. Most background research information is relevant to science fair problem or hypothesis.	specific field of science. Develops a simplistic testable question to investigate with direction. Background research is limited or does not directly relate to science fair problem or hypothesis.	Teacher provided or heavily directed development of a testable question. Background research information is incomplete and not connected to problem or hypothesis.
SCIENCE: Develops skills for inquiry and communication	**Skills: Initiating and Planning PLAN** Select appropriate methods and tools for collecting data and information**.**	Developed a comprehensive plan using realistic tools and methods for collecting data and information.	Developed a substantial plan using relevant tools and methods for collecting data and information.	Developed a basic plan using simplistic tools and methods for collecting data and information.	Plan is not fully developed. Realistic tools and methods are not identified.
SCIENCE: Develops skills for inquiry and communication	**Skills:Performing and Recording** **RESEARCH** Organize data, using a format that is appropriate to the task or experiment.	Data has been thoroughly collected and organized. Graphs and charts are labeled, self-explanatory, and directly address the problem. The chosen method to display data is extremely effective.	Data has been collected and is mostly organized. Graphs and charts are labelled and are mostly self-explanatory. The chosen method to display data is mostly effective.	Data has been collected with some gaps. Graphs and/or charts are mostly complete and may be missing some labels or relevant information. The chosen method to display data is adequate.	Data is missing and/or incomplete. Graphs and charts are unfinished or missing or display inaccurate information. The chosen method to display data is inappropriate.
SCIENCE: Develops skills for inquiry and communication	**Skills: Analyzing & Interpreting** **CONCLUSION** Identify and suggest explanations for discrepancies in data. State a conclusion, based on experimental data, and explain how evidence gathered supports or refutes an initial idea.	Sources of error that may impact results are identified and explained, potential flaws with design addressed in detail. Clearly stated and well supported conclusions with reasonable alternate explanations for results.	Sources of error that would impact results were identified, potential flaws with design identified. Clearly stated conclusion supported by results an attempt at alternate explanations.	Sources of error that would not impact results were identified, potential flaws with design not identified. States a conclusion which is not supported by data, offers no alternate explanations.	Sources of error and flaws in design not identified. Limited understanding of data based conclusions.

Grade 8- Science Fair Rubric

Report Card Stem	Program of Studies Outcome	4 Excellent	3 Good	2 Basic	1 Not meeting minimum expectations
HUMANITIES: Manages and evaluates information and ideas	Develop and use criteria for gathering, recording and evaluating information	Evaluates gathered information and refines criteria to address research needs.	Develops intentional criteria to determine the relevance of gathered information.	Use criteria to determine the relevance of gathered information.	Gathers and records information using familiar criteria.
HUMANITIES: Writes to develop, organize and express information and ideas	**Revise and edit** Revise by adding words and phrases that emphasize important ideas or create dominant impressions. Revise to enhance sentence variety, word choice and appropriate tone.	Clear evidence of revision through teacher conferencing and/or peer/self- editing.Conveys message in an exceptionally interesting, precise, yet natural way. Original expression, rich, powerful range of words and effective tone. Sentence lengths and beginnings enhance the flow within the writing.	Evidence of revision through teacher conferencing and/or peer/ self- editing. Effectively conveys message.Variety of words that are clear and interesting. Sentence lengths and beginnings show variety.	Some evidence of revision. Language is quite ordinary or generic. Correctly used words and expressions. Accurate for the most part, with some variety of sentence lengths and/or beginnings.	Limited evidence of revision. Language is monotonous and/or misused. Sentence lengths and beginnings are basic and often repeated.
HUMANITIES: Constructs meaning and makes connections through speaking	**Present Information** Plan and facilitate small group and short, whole class presentations to share information. **Enhance Presentation** Present information to achieve a particular purpose and to appeal to interest and background knowledge of reader or audience	Presentation is clearly planned and well-executed. Information is interesting, relevant and well-organized. The presentation is catered to the interest and background knowledge of the audience and demonstrates a thorough understanding of the topic.	Presentation is planned and executed smoothly. Information follows a sequence. The presentation is somewhat catered to the background knowledge of the audience. The presenter shows a good understanding of the topic.	Presentation is somewhat planned and mainly follows a sequence. The presentation is the same for all audience members. The presenter shows a basic understanding of the topic.	Presentation is unplanned or does not follow a discernable sequence. The presenter may not share information unless prompted. The presenter shows a minimal understanding of the topic.
SCIENCE: Develops skills for	**Skills: Initiating and Planning QUESTIONS**	Identifies a significant and relevant problem related to	Identifies a challenging problem	Identifies a basic problem related to a	Problem is not clearly identified.

inquiry and communication	Identify questions to investigate. Define and delimit questions to facilitate investigation. State a prediction and a hypothesis based on background information.	a specific field of science. Develops a comprehensive and testable question to investigate. Background research is integrated into the formation of the problem or hypothesis and recommends an approach to solving a given problem, based on findings.	related to a specific field of science, Develops a relevant testable question to investigate independently. Most background research information is relevant to science fair problem or hypothesis.	specific field of science. Develops a simplistic testable question to investigate with direction. Background research is limited or does not directly relate to science fair problem or hypothesis.	Teacher provided or heavily directed development of a testable question. Background research information is incomplete and not connected to problem or hypothesis.
SCIENCE: Develops skills for inquiry and communication	**Skills: Initiating and Planning** **PLAN** Select appropriate methods and tools for collecting data and information.	Developed a comprehensive plan using realistic tools and methods for collecting data and information.	Developed a substantial plan using relevant tools and methods for collecting data and information.	Developed a basic plan using simplistic tools and methods for collecting data and information.	Plan is not fully developed. Realistic tools and methods are not identified.
SCIENCE: Develops skills for inquiry and communication	**Skills:Performing and Recording** **RESEARCH** Organize data, using a format that is appropriate to the task or experiment.	Data has been thoroughly collected and organized. Graphs and charts are labeled, self-explanatory, and directly address the problem. The chosen method to display data is extremely effective.	Data has been collected and is mostly organized. Graphs and charts are labelled and are mostly self-explanatory. The chosen method to display data is mostly effective.	Data has been collected with some gaps. Graphs and/or charts are mostly complete and may be missing some labels or relevant information. The chosen method to display data is adequate.	Data is missing and/or incomplete. Graphs and charts are unfinished or missing or display inaccurate information. The chosen method to display data is inappropriate.
SCIENCE: Develops skills for inquiry and communication	**Skills: Analyzing & Interpreting** **CONCLUSION** Identify and suggest explanations for discrepancies in data. State a conclusion, based on experimental data, and explain how evidence gathered supports or refutes an initial idea.	Sources of error that may impact results are identified and explained, potential flaws with design addressed in detail. Clearly stated and well supported conclusions with reasonable alternate explanations for results.	Sources of error that would impact results were identified, potential flaws with design identified. Clearly stated conclusion supported by results an attempt at alternate explanations.	Sources of error that would not impact results were identified, potential flaws with design not identified. States a conclusion which is not supported by data, offers no alternate explanations.	Sources of error and flaws in design not identified. Limited understanding of data based conclusions.

Grade 9- Science Fair Rubric

Report Card Stem	**Program of Studies Outcome**	**4 Excellent**	**3 Good**	**2 Basic**	**1 Not meeting minimum expectations**
Manages and evaluates information and ideas	Summarize information and texts into own words; reference sources.	Synthesizes information and texts from a variety of sources: integrates evidence to support ideas and sources are referenced.	Summarizes and analyzes information and texts; specific evidence supports ideas and sources are referenced.	Summarizes the information and texts with some errors; evidence related to ideas and sources are mostly referenced.	Records information and lists sources with teacher support.
Writes to develop, organize and express information and ideas	**Revise and Edit** Revise to ensure effective introductions, effective transitions between ideas and appropriate conclusions. Revise to maintain a consistent organizational pattern.	Clear evidence of teacher conferencing and/or peer/ self-editing. Topic sentences drive body paragraphs. Effective transitions clarify relationships among ideas. Conclusion and introductions are clear and concise and introduce or summarize with accuracy.	Evidence of teacher conferencing and/or peer/ self-editing. Topic sentences are complete and introduce the body paragraphs. Transitions progress between ideas. Conclusions or introductions may be brief or may not completely introduce or summarize.	Some evidence of editing. Topic sentences are sometimes complete and relevant to the body paragraph. Some transition sentences are apparent but may not be used appropriately. Conclusions or introductions may be incomplete or difficult to understand.	Limited evidence of the editing process. Little or no discernable structure. Few transition strategies exist. Frequent extraneous ideas may intrude.
Constructs meaning and makes connections through speaking	**Present Information** Select, organize and present information to appeal to the interests and background knowledge of various readers or audiences **Enhance Presentation** Choose appropriate types of evidence and strategies to clarify ideas and information, and to convince various readers and audiences	Presentation is clearly planned and well-executed. Information is interesting, relevant and well-organized. The presentation is catered to the interest and background knowledge of the audience and demonstrates a thorough understanding of the topic.	Presentation is planned and executed smoothly. Information follows a sequence. The presentation is somewhat catered to the background knowledge of the audience. The presenter shows a good understanding of the topic.	Presentation is somewhat planned and mainly follows a sequence. The presentation is the same for all audience members. The presenter shows a basic understanding of the topic.	Presentation is unplanned or does not follow a discernable sequence. The presenter may not share information unless prompted. The presenter shows a minimal understanding of the topic.

SCIENCE: Develops skills for inquiry and communication	**Skills: Initiating and Planning** **QUESTIONS** Identify questions to investigate. Define and delimit questions to facilitate investigation. State a prediction and a hypothesis based on background information.	Identifies a significant and relevant problem related to a specific field of science. Develops a comprehensive and testable question to investigate. Background research is integrated into the formation of the problem or hypothesis and recommends an approach to solving a given problem, based on findings.	Identifies a challenging problem related to a specific field of science, Develops a relevant testable question to investigate independently. Most background research information is relevant to science fair problem or hypothesis.	Identifies a basic problem related to a specific field of science. Develops a simplistic testable question to investigate with direction. Background research is limited or does not directly relate to science fair problem or hypothesis.	Problem is not clearly identified. Teacher provided or heavily directed development of a testable question. Background research information is incomplete and not connected to problem or hypothesis.
SCIENCE: Develops skills for inquiry and communication	**Skills: Initiating and Planning** **PLAN** Select appropriate methods and tools for collecting data and information**.**	Developed a comprehensive plan using realistic tools and methods for collecting data and information.	Developed a substantial plan using relevant tools and methods for collecting data and information.	Developed a basic plan using simplistic tools and methods for collecting data and information.	Plan is not fully developed. Realistic tools and methods are not identified.
SCIENCE: Develops skills for inquiry and communication	**Skills:Performing and Recording** **RESEARCH** Organize data, using a format that is appropriate to the task or experiment.	Data has been thoroughly collected and organized. Graphs and charts are labeled, self-explanatory, and directly address the problem. The chosen method to display data is extremely effective.	Data has been collected and is mostly organized. Graphs and charts are labelled and are mostly self-explanatory. The chosen method to display data is mostly effective.	Data has been collected with some gaps. Graphs and/or charts are mostly complete and may be missing some labels or relevant information. The chosen method to display data is adequate.	Data is missing and/or incomplete. Graphs and charts are unfinished or missing or display inaccurate information. The chosen method to display data is inappropriate.
SCIENCE: Develops skills for inquiry and communication	**Skills: Analyzing & Interpreting** **CONCLUSION** Identify and suggest explanations for discrepancies in data. State a conclusion, based on experimental data, and explain how evidence gathered supports or refutes an initial idea.	Sources of error that may impact results are identified and explained, potential flaws with design addressed in detail. Clearly stated and well supported conclusions with reasonable alternate explanations for results.	Sources of error that would impact results were identified, potential flaws with design identified. Clearly stated conclusion supported by results an attempt at alternate explanations.	Sources of error that would not impact results were identified, potential flaws with design not identified. States a conclusion which is not supported by data, offers no alternate explanations.	Sources of error and flaws in design not identified. Limited understanding of data based conclusions.