Interactions Among the Four Broad Areas of Skills

Initiating and Planning

Formulate questions or hypotheses or make predictions about issues, problems, or the relationships between observable variables, and plan investigations to answer the questions or test the hypotheses/predictions

Think and brainstorm

Identify problems/issues to explore

Formulate questions

Identify variables

Make predictions, develop hypotheses

Define and clarify the inquiry or research problem

Identify and locate research sources

Select instruments and materials

Plan for safe practices in investigations



Communicating

Use appropriate linguistic, numeric, symbolic, and graphic modes to communicate ideas, procedures, results, and conclusions in a variety of ways

Communicate ideas, procedures, and results in a variety of forms (e.g., orally, in writing, using electronic presentations)

Use appropriate formats to communicate results (e.g., reports, data tables, scientific models)

Use numeric, symbolic, and graphic modes of representation

Express results accurately and precisely
Use correct terminology and appropriate
units of measurement



Performing and Recording

Conduct research by gathering, organizing, and recording information from appropriate sources; and conduct inquiries, making observations and collecting, organizing, and recording qualitative and quantitative data

Conduct inquiries safely

Observe, and record observations

Use equipment, materials, and technology accurately and safely

Control variables, as appropriate

Adapt or extend procedures

Gather, organize, and record relevant information from research, and data from inquiries

Acknowledge sources, using an accepted form of documentation

Analysing and Interpreting

Evaluate the reliability of data from inquiries, and of information from research sources, and analyse the data or information to identify patterns and relationships and draw and justify conclusions

Think critically and logically

Evaluate reliability of data and information

Process and synthesize data

Evaluate whether data supports or refutes hypotheses/predictions

Interpret data/information to identify patterns and relationships

Draw conclusions

Justify conclusions

Identify sources of error or bias

Your task: Looking at the examples on the back of the sheet, please visit projects and write examples of how the students at Canada Wide Science Fair have accomplished each of the 4 Areas of Skills. Please use a different project for each Skill. This will allow you to visit more projects and look at how they incorporated these skills in their projects.

Interactions Among the Four Broad Areas of Skills

Initiating and Planning Project Name: How they initiated and planned Communicating Performing and Recording Project Name: Project Name: How they communicated How they performed and recorded **Analysing and Interpreting** Project Name: How they analysed and interpreted