

Decoding Carbon Marking Rubric



Level 5	Level 4	Level 3	Level 2	Level 1
Initiating and Planning				
Students ask questions about observed relationships, and plan investigations of questions, ideas, problems, and issues e.g., defining a problem; stating a hypothesis; identifying variables; defining required materials and tools				
Prediction is clear and insightful, referencing a significant amount of evidence and background information from the activity as well as concepts previously learnt in class.	Prediction is clear and is based on some of evidence and background information from the activity as well as concepts previously learnt in class.	Prediction is clear and is based on background information from the activity.	Prediction is not based on evidence or background information.	Prediction is vague or does not relate to the issue and is not based on evidence or background information.
Evidence is collected using a variety of appropriate and reliable instruments. The most effective decision-making processes are selected to allow for perceptive problem solving.	Evidence is collected using multiple of appropriate instruments. A clear decision making processes is selected to allow for well-reasoned problem solving.	Evidence is collected using an appropriate instrument. A decision making processes is selected to allow for concrete problem solving.	Evidence is collected using inappropriate instruments. Incomplete decision making processes are selected for problem solving.	Evidence is collected using undefined instruments. Decision making processes are selected that do not address the problem.
Performing and Recording				
Students conduct investigations into relationships between variables, and use a tools and techniques to gather and record data and information e.g., researching, compiling, and organizing data				
Research tools and instruments are used to effectively and accurately collect information and data.	Research tools and instruments are used to clearly and accurately collect information and data.	Research tools and instruments are used to accurately collect information and data.	Research tools and instruments are used to collect limited or vague information and data.	Research tools and instruments are used to collect incorrect or inappropriate information and data.

Data is compiled and organized using effective formats and data treatments to facilitate perceptive interpretation of the data.	Data is compiled and organized using appropriate formats and data treatments to facilitate well-reasoned interpretation of the data.	Data is compiled and organized using adequate formats and data treatments to facilitate concrete interpretation of the data.	Data is compiled and organized using appropriate formats and data treatments to facilitate interpretation of the data.	Data is compiled and organized using appropriate formats and data treatments to facilitate interpretation of the data.
Insightful information is selected and integrated from various sources or from several parts of the same source.	Appropriate information is selected and integrated from various sources or from several parts of the same source.	Information is selected and integrated from one source or from a couple parts of the same source.	Inadequate or incomplete information is selected and integrated from a source.	Inappropriate information is selected. Sources are not listed.

Analyzing and Interpreting

Students ask questions about observed relationships, and plan investigations of questions, ideas, problems, and issues e.g., use of nomenclature; comparisons; graphing; analysis; sources of error; analyzing data; drawing conclusions; prototyping; iterations

Evidence and information are compiled and displayed effectively and in a variety of formats.	Evidence and information are compiled and displayed clearly and in a variety of formats.	Evidence and information are adequately and correctly compiled and displayed.	Evidence and information are incompletely displayed.	Evidence and information are incorrectly displayed.
Patterns and trends in data are thoughtfully interpreted and relationships among variables are perceptively inferred and calculated when appropriate.	Patterns and trends in data are interpreted with reason and relationships among variables are inferred and calculated when appropriate.	Patterns and trends in data are well as relationships among variables are identified. Calculation may be missing or incorrect.	Limited patterns and trends in data as well as relationships among variables are identified and may be incorrect. Calculation is missing or incorrect.	Patterns, trends and relationships are incorrectly identified. Calculation is missing or incorrect.
Strengths and weaknesses from a variety of excellent potential solutions are insightfully compared, and a single solution is selected.	Strengths and weaknesses from a variety of well-reasoned potential solutions are compared, and a single solution is selected.	Strengths and weaknesses from a couple acceptable potential solutions are compared and a single solution is selected.	Strengths and weaknesses from a single solution is identified.	A single solution is selected.

Communication				
Students ask questions about observed relationships, and plan investigations of questions, ideas, problems, and issues e.g., analogies, explanations; synthesizing information; multiple perspectives; significant digits; modes of communication				
Information is masterfully synthesized from multiple sources or from complex and lengthy texts to form insightful inferences.	Information is clearly synthesized from multiple sources or from complex and lengthy texts to form well developed inferences	Information is adequately synthesized from sources to form basic inferences.	Information is incompletely synthesized from a single source to form limited inferences.	Information is incorrectly synthesized to form inaccurate inferences.
Evidence or finding are effectively used to develop, present, and defend a perceptive position or course of action.	Evidence or finding are used to clearly develop, present and defend a well-reasoned position or course of action.	Evidence or finding are used concretely to develop, present, and defend a basic position or course of action.	Evidence or finding are used to incompletely develop, present, and defend a vague position or course of action.	Evidence or finding are not used when developing, presenting and/or defending a position or course of action.
Climate Concepts				
Investigate and interpret the role of environmental factors on global energy transfer and climate change				
A variety of human actions and their impact on biomes and climate change have been insightfully described.	A variety of human actions and their impact on biomes and climate change have been clearly described.	A few human actions and their impact on biomes and climate change have been sufficiently described.	A limited number of human actions and their impact on biomes and climate change have been incompletely described.	Human actions and their impact on biomes and climate change have been inaccurately described.
Climate and climate change is effectively and astutely described and evaluated through a masterful understanding of scientific concepts and international programs.	Climate and climate change is clearly described and evaluated through a well-developed understanding of scientific concepts and international programs.	Climate and climate change is concretely described and evaluated through a developing understanding of scientific concepts and international programs.	Climate and climate change is vaguely described through an incomplete understanding of scientific concepts and international programs	Climate and climate change is incorrectly described and evaluated through an inaccurate understanding of scientific concepts and international programs
Measuring, modelling and interpreting climate and climate change technology has been excellently described.	Measuring, modelling and interpreting climate and climate change technology has been well described.	Measuring, modelling and interpreting climate and climate change technology has been adequately described.	Measuring, modelling and interpreting climate and climate change technology has been incompletely described.	Measuring, modelling and interpreting climate and climate change technology has been inaccurately described.
An abundant list of risks and benefits of human activity, and their impacts on the biosphere and the climate, have been insightfully assessed from a large variety of perspectives.	A significant list of risks and benefits of human activity, and their impacts on the biosphere and the climate, have been assessed with reason from a large variety of perspectives.	A few risks and benefits of human activity, and their impacts on the biosphere and the climate, have been concretely assessed from a few perspectives.	Risks and benefits of human activity, and their impacts on the biosphere and the climate, have been unclearly assessed from a limited number of perspectives.	Risks and benefits of human activity, have been incorrectly linked to their impacts on the biosphere and the climate and may be from a single perspectives.