

Guide to making judgments — Year 9 Science

Student

Purpose: To use evidence and scientific argument to draw conclusions and to inform an opinion about climate change and its effects.

Investigating	Knowledge and understanding	Investigating	Communicating
<p>Draws conclusions and makes predictions consistent with data and evidence.</p> <p>Questions 1, 2, 3, 4, 5, 11, 13</p>	<p>Uses equations and diagrams to describe and explain chemical changes and energy transformations.</p> <p>Questions 8, 9, 10, 12</p>	<p>Uses data, evidence and scientific argument to evaluate and propose hypotheses and to inform an opinion.</p> <p>Questions 6, 7, 14, 15</p>	<p>Uses scientific terminology in conclusions, predictions and arguments.</p> <p>Uses appropriate formats in chemical equations and energy diagrams.</p> <p>Questions 1–15</p>
<p>Consistently and accurately interprets data and evidence to justify valid conclusions and predictions.</p> <p>Uses data and evidence to explain some valid conclusions and plausible predictions.</p> <p>Draws a valid conclusion or makes a plausible prediction.</p>	<p>Writes chemical formulas with correct ratios and balances chemical equations. Energy diagrams correctly identify all energy forms and illustrate all transfers and transformations, including waste heat.</p> <p>Correctly identifies reactants and products in word equations. Chooses correct chemical symbols and writes most chemical formulas with correct ratios. Energy diagrams identify and illustrate most energy transfers and transformations.</p> <p>Partially completes word equations and energy diagrams. Chooses some correct chemical symbols.</p>	<p>Provides accurate and insightful scientific arguments, considering all data and evidence.</p> <p>Supports the evaluation and proposal of hypotheses with valid interpretations of evidence. Gives a reasoned opinion about climate change and its effects based on a thorough analysis of the evidence.</p> <p>Offers a valid opinion about climate change and its effects based on an incomplete analysis of the evidence. Uses evidence to evaluate or propose a credible hypothesis.</p> <p>Offers an opinion based on a minimal consideration of the evidence, with some confusion of concepts or misinterpretation of evidence.</p> <p>Provides an opinion or hypothesis based on preconceptions.</p>	<p>Displays fluency in the use of scientific terminology when drawing conclusions, making predictions and constructing arguments.</p> <p>Uses accepted formats when constructing formulas for chemical compounds and when writing and balancing equations. Draws clear, fully labelled energy diagrams.</p> <p>Correctly uses some scientific terminology when drawing conclusions, making predictions and constructing arguments. Writes formulas and equations with variable use of accepted formats. Draws energy diagrams which adequately convey meaning.</p> <p>Makes minimal use of scientific terminology and formats.</p>
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			B
			C
			D
			E

Feedback

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