Design Process Rubric

	Level 1	Level 2	Level 3	Level 4
INITIATING AND PLANNING	works on a problem set by the teacher or group	identifies a problem to solve but it may not be practical	identifies a practical problem to solve	identifies a practical problem to solve and gives some criteria for solving it
	suggests a solution to the problem and, with prompting, offers ideas about procedure	suggests a solution to the problem and makes a simple plan	suggests several possible solutions to the problem and chooses one; makes a simple plan	suggests several possible solutions to the problem that address the criteria; chooses the best solution and makes a simple plan
	with prompting, identifies some materials which could be used to carry out the plan	identifies some materials and describes how they could be used to carry out the plan	selects appropriate materials and describes how they will be used to carry out the plan	selects appropriate materials to carry out the plan and explains reasons for choice
PERFORMING AND RECORDING	with prompting, carries out the plan/follows a simple procedure	carries out the plan/ follows most of a simple procedure	carries out the plan/follows a simple procedure	carries out the plan/ follows a simple procedure, making adjustments as necessary
	with prompting, uses some appropriate tools with assistance	selects and uses common tools	selects and uses some appropriate tools	selects and uses all appropriate tools
	makes simple observations using senses and, with prompting, records observations in provided charts or drawings	makes some relevant observations using senses and records observations in provided charts and drawings	makes relevant observations using appropriate senses and records observations using a suitable method	makes relevant, detailed observations using appropriate senses and records observations and chooses an effective method for recording observations
	needs help to estimate measurements and, with prompting, records simple measurements	estimates measurements but units may not be appropriate and records measurement which may be incomplete	estimates measurements using appropriate units and records measurements accurately	consistently estimates measurements using the most appropriate units and records measurements accurately in a variety of ways
	constructs a prototype but does not follow the plan	constructs a prototype according to the plan but the device may not be usable	constructs a usable prototype according to the plan	constructs a usable prototype according to the plan with modifications for improvement
	needs help to follow safety procedures and rules	needs occasional prompting to follow safety procedures and rules	follows most safety procedures and rules	follows all safety procedures and rules and explains why they are needed

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Design Process Rubric (Continued)

	Level 1	Level 2	Level 3	Level 4
ANALYZING AND INTERPRETING	with prompting, says whether or not a solution works	says whether a solution works in terms of some simple criteria	evaluates and explains the effectiveness of a solution in terms of simple criteria	evaluates and explains the effectiveness of a solution in terms of a broad range of criteria
	with prompting, identifies some patterns and discrepancies in objects and events	identifies and suggests simple explanations for some patterns and discrepancies in objects and events	identifies and suggests explanations for most patterns and discrepancies in objects and events	identifies and suggests clear explanation for patterns and discrepancies in objects and events
	with prompting, identifies some new questions but they may not be on the same topic	identifies some new questions on the same topic	identifies some new questions that arise from the solution	identifies new questions that arise from the solution and suggests how they could be solved
	with prompting, makes simple suggestions for changes to improve the device/solution	suggests some practical changes to improve the device/solution	suggests and makes practical changes to improve the device/ solution	makes effective changes to improve the device/ solution
COMMUNICATING AND TEAMWORK	willingly asks for help and accepts help from other group members	makes suggestions to group members as to what should be done	communicates with group members, sometimes with problems	communicates and works effectively with group members
	understands some scientific terminology but rarely uses it	understands simple scientific terminology but does not always use it correctly	usually uses scientific terminology appropriately	consistently uses scientific terminology appropriately
	with prompting, describes the solution and some of the procedures	communicates basic information about the solution and most of the procedures	communicates most of the information about the solution and procedures	accurately communicates the information about the solution and procedures
	listens to others and learns from their observations	listens to others and learns from their observations, and draws on their language use	considers and responds to the ideas of others and learns from their observations and descriptions	considers and responds to the ideas of others and applies the observations and descriptions to their own ideas and understandings

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