teachersTryScience

TEACH Engineering Resources for K-12

PRODUCT LIFECYCLE RUBRIC	3	2	1	0
Section				
Describe the steps in a product lifecycle	Description (verbal, written, graphical, etc.) includes relevant vocabulary such as materials acquisition and materials processing and clearly moves from acquistion, processing, sale, uses, and disposal. Student can communicate what happens at each step.	Description uses some relevant vocabulary and moves clearly from acquisition to disposal. Student can explain what happens at each step	Description uses little vocabulary and steps in the product life cycle are missing or out of order. Student has difficulty explaining what happens during each step.	No description
Describe the steps in a product lifecycle assessment	Description (verbal, written, graphical, etc.) includes relevant vocabulary such as inventory analysis and impact analysis and clearly moves from inventory analysis to improvement analysis. Student can communicate what happens at each step.	Description uses some relevant vocabulary and moves clearly from inventory to improvement analysis. Student can explain what happens at each step	Description uses little vocabulary and steps in the product life cycle assessment are missing or out of order. Student has difficulty explaining what happens during each step.	No description
Suggest ways to reduce the environmental impacts of an engineered product.	Suggestions are logical, clearly communicated and pull from prior knowledge, data from the class activity/worksheet, and scientific reasoning.	Suggestions are logical, and reference prior knowledge, data from the class activity/worksheet, and scientific reasoning. Connections to the class activity could be stronger OR there is some faulty scientific reasoning.	Suggestions are not very logical or feasible, but student does reference prior knowledge or data from the class activity/worksheet.	No suggestions

PRODUCT LIFECYCLE RUBRIC	3	2	1	0
Section				
Explain how a life cycle assessment is a useful tool for engineers.	Explanation (verbal, written, visual, etc.) references class activity/worksheet and pre-class discussion. Explanation is clear, logical, and creative.	Explanation (verbal, written, visual, etc.) has some references to the class activity/worksheet and pre-class discussion. Explanation is fairly clear and logical.	Explanation (verbal, written, visual, etc.) has few references to the class activity/worksheet and pre-class discussion. Explanation is not very clear and logical.	No explanation included
Compare and contrast the life cycle of an organism and an engineered product.	Includes relevant ecological vocabulary and references to the class activity/worksheet. Comparison/contrast is logical and based on science.	Includes some relevant ecological vocabulary and some references to the class activity/worksheet. Comparison/contrast is mostly logical and based on science.	Includes little relevant ecological vocabulary and few references to the class activity/worksheet. Comparison/contrast includes faulty logic or incorrect science.	No compare/contrast.

PRODUCT LIFECYCLE RUBRIC	2	0
Safety		
Student follows all safety instructions	Student does follow all safety instructions	Student does not follow all safety instructions
Student completes life cycle assessment sheet	Student does complete sheet	Student does not complete sheet