Extreme Container Challenge Rubric

	Beginning	Developing	Proficient	Advanced
Understanding Materials and Extreme Conditions	Demonstrates little understanding of phase changes and their impact in extreme environmental conditions and the importance of designing containers for such conditions.	Shows some understanding of phase changes and their impact in extreme environmental conditions and the significance of designing containers for withstanding them.	Demonstrates a good understanding of phase changes and their impact in extreme environmental conditions and why designing containers to endure them is crucial.	Shows excellent understanding of phase changes and their impact in extreme environmental conditions and the critical role of designing containers to withstand them.
Material Research and Analysis	Has minimal research on the selected materials and their properties in extreme conditions.	Conducts basic research on the chosen materials and links their properties to potential reactions in extreme conditions.	Conducts thorough research on the selected materials, analyzing their properties and predicting behavior in extreme environmental conditions.	Conducts extensive research on the chosen materials, delving deep into their properties and accurately predicting behavior in extreme conditions.
Container Design and Justification	Design of the container lacks consideration of extreme conditions and justification for material choice is unclear.	Designs a container with some consideration of extreme conditions, but justification for material choice is vague.	Designs a container considering extreme conditions and provides reasoning for material selection based on research.	Designs a well-thought-out container with detailed consideration for extreme conditions, and justifies material choice clearly based on thorough research.
Testing and Analysis	Shows limited effort in testing the container under simulated extreme conditions and lacks detailed observation and recording of results.	Tests the container under simulated extreme conditions, but observations and recording of results are basic.	Thoroughly tests the container under various extreme conditions, recording changes observed and analyzing the results effectively.	Conducts comprehensive testing of the container under simulated extreme conditions, meticulously records observations, and provides in-depth analysis of the results.
Reflection and Presentation	Provides minimal reflection on the design process and findings, with a basic presentation of project outcomes.	Offers some reflection on the design process and findings, accompanied by a satisfactory presentation of project outcomes.	Reflects on the design process and findings well, delivering a clear and structured presentation of project outcomes.	Demonstrates insightful reflection on the design process and findings, delivers a compelling presentation of project outcomes that showcases deep understanding.