Rubric

Glow	Criteria	Grow
	Scientific Concepts ● Demonstrates understanding of form and function concepts relevant to vehicle design and performance.	
	Engineering Design Process ● Clearly follows the steps of the engineering design process, including brainstorming, planning, designing, building, programming, testing, iteration, and reflection.	
	Autonomous Vehicle Design ● Design effectively incorporates form and function principles to enhance vehicle performance, navigation, and adaptation to different terrains. ● Shows creativity and originality in the design, considering aesthetics, stability, and functionality.	
	Programming and Autonomy ● Successfully programs the autonomous functionalities of the vehicle, demonstrating an understanding of basic programming concepts. ● Vehicle effectively navigates and adapts to different terrains using sensors and algorithms. ● Autonomous features are reliable and accurately respond to the environment.	
	Problem-Solving and Iteration ● Demonstrates a systematic approach to problem-solving, identifying and addressing design challenges effectively.	

	• Engages in iterative processes to improve the vehicle's form, function, and autonomous capabilities based on testing and feedback.	
	Teamwork and Collaboration • Collaborates effectively with team members, contributing ideas, actively participating in discussions, and sharing responsibilities. • Works cooperatively to build and troubleshoot the vehicle, demonstrating effective communication and cooperation skills.	
	Presentation and Communication • Presents the prototype and design choices clearly and confidently, using appropriate scientific and technical terminology. • Articulates the connection between form, function, and autonomous capabilities in the vehicle. • Engages the audience and effectively answers questions about the design and performance.	
	Reflection and Evaluation • Reflects on the design process, identifying strengths, weaknesses, and areas for improvement. • Demonstrates critical thinking by analyzing and evaluating the vehicle's performance and suggesting ways to enhance form, function, and autonomy.	
	Overall Execution • Prototype demonstrates a high level of craftsmanship, attention to detail, and functionality. • Shows a comprehensive understanding of the scientific concepts, engineering	

	principles, and autonomous functionalities relevant to the challenge.	