National Science Bowl® Middle School Electric Car Competition

Presentation Guidelines and Rubric

Judges will combine the scores of the **Engineering Design Document** and **Design Interview** to determine the top six teams to complete a presentation under the scenario of a commercial advertisement for the Dabman™ Toy Company. Teams will pitch the sale of their cars in presentations under the scenario of a commercial advertisement for the Dabman™ Toy Company. Judges will evaluate each team's potential to market their lithium-ion battery-powered model car and inspire the next generation of scientists in novel, green technology while incorporating energy savings awareness. The presentation may be conducted by one or more team members and must be completed within a 5-minute timeframe.

Presentation Scenario

About the Dabman™ Toy Company

From the 1950's the Dabman™ Toy Company started out as a one-room store-front shop in Colorado making wooden rockets. The company has now evolved to offer a variety of innovative car products making it a Fortune 500 toy company. Dabman™ Toys has captured the hearts and minds of millions and has become an international phenomenon. While the focus has changed throughout the years, Dabman™ Toys has redesigned its product line with toys that are enjoyable for children, have educational benefits for the child and are a good value for the purchaser.

Dabman™ and the Lithium-ion Battery Model Car

Dabman™ is excited about their new product line of wooden lithium-ion battery-powered model cars. Lithium-ion battery technology will be used in the future for the United States to power hybrid and electric cars, while enhancing energy security, reducing petroleum dependence and lowering emissions. These toys will let children test out a novel and green technology that already powers cell phones, cameras, and computers. Market analysis has shown that there is a 64% increase in interest of children from the ages of 11-14 in designing and racing model cars and Dabman™ wants to capture this audience with a new model car. The battery technology is exciting with the lithium-ion battery providing lighter weight, denser energy storage with a ten-to-fifteen year lifetime and high performance. Dabman™ is hoping to inspire the next generation of scientists and drivers to find the breakthrough technology to help meet the nation's goal of 1 million electric cars on the road by 2015.

Presentation Components

1) <u>Originality & Presentation Skills</u>
The presentation will take the form of a live sales pitch that captivates the audience with a creative commercial advertisement. No video or pre-produced media will be allowed. A picture of the team's vehicle will be projected behind the team during the presentation.

2) <u>What is Special about this Particular Electric Vehicle?</u>
Demonstrate the overall advantages of the vehicle design and why consumers should buy the team's car. Emphasize key selling points that make the car an outstanding performer and fun to use. Highlights of superior engineering could include car specifications describing key materials, components, and performance of the car as determined in initial testing. In addition, teams may also include factors that attribute to marketability such as outer body aesthetics (see Design Interview Guidelines).

3) <u>Design Innovation</u>
Identify the creative design innovations used to improve the vehicle's performance. These innovations should be described in detail and demonstrate unique characteristics.

4) <u>Cost</u>
The commercial should advertise that the car is affordable and a sensible purchase. This can be illustrated in the design of the car by demonstrating cost reducing measures in its construction from repurposed and recycled consumer materials and the incorporation of simple design that conserves energy and manufacturing expenses.

2014 NSB
NATIONAL SCIENCE BOWL®
a competition like no other . . .

Presentation Rubric

School Name _____

Each team will pitch their car design as a commercial advertisement. These presentations may be conducted by one or more team members. All components need to be within a 5-minute timeframe. Teams exceeding this time limit will have 5 points deducted from their overall presentation scores. Presentations will be judged using the rubric below.

Components	Points Awarded				Score	Comments
1) <u>Presentation Skills & Originality</u> Eye contact, volume, pace, use of language, use of visuals and enthusiasm. Captivates audience.	*Exceptional* 5 POINTS	*Exceeds Expectations* 4 POINTS	*Meets Expectations* 3 POINTS	*Does not meet expectations* 0 POINTS		
2) <u>What is Special about this Particular Electric Vehicle?</u> Explains key advantages of the vehicle's design. Provides rationale of why consumers would purchase the car.	*Exceptional* 5 POINTS	*Exceeds Expectations* 4 POINTS	*Meets Expectations* 3 POINTS	*Does not meet expectations* 0 POINTS		
3) <u>Design Innovation</u> Explains unique design innovations used to improve vehicle performance.	*Exceptional* 5 POINTS	*Exceeds Expectations* 4 POINTS	*Meets Expectations* 3 POINT	*Does not meet expectations* 0 POINTS		
4) <u>Cost</u> Conveys to the audience that the car is affordable and a sensible purchase.	*Exceptional* 5 POINTS	*Exceeds Expectations* 4 POINTS	*Meets Expectations* 3 POINT	*Does not meet expectations* 0 POINTS		
☐ Within 5 Minutes			☐ Exceeds 5 Minutes – 5 Point Deduction			
*JUDGE*_____			TOTAL	___/20		