



The asbe Foundation

67th High School Design Challenge

Rules and Guidelines for the 2022

Design Concept Category

The Design Concept Category will ask the student to propose a creative and aesthetic design solution to a given automotive application. The student will follow the Design Process which starts with a rough concept sketch followed by a depiction of refinements to achieve a final design rendering. The presentation can be made as a free hand rendering, any computer graphic program, scale model, or any combination of these. A written document must be submitted with the design with supporting explanation of the progression the student went through in the creation of the design. Orthographic drawings are not necessary for this category.

Eligibility: The *Design Challenge* is open to all students, grades 9 through 12, who have an interest in Creative Design. Contestants are encouraged to research the project before beginning and may seek out advice during this early stage; however, the design and submission must be the creation of the contestant. Only one entry per student is permitted but each school may enter as many students as they wish.

The Design Concept Category Problem:

The *Design Concept Category* requires the student to creatively design a replacement of the standard rear seat, fold down, center armrest to a combination of armrest and convenience center for rear seat passengers. For the purpose of this project, assume that when the center armrest is in the down position is available to store or mount convenience items. The items considered must include a phone holding and charging features for both passengers and any number of items or features that would be advantageous for rear seat passenger usage. Envision how occupants in the future will be working or using this space and include those features. Design Considerations are, it must be attractively styled, function as an armrest and still be able to folded into the seatback to accommodate a third passenger in the rear seat

Students are required to show a design progression of refined sketches to show the development of their final submission. As noted above, this presentation can use any combination of computer graphics program, hand rendering, or physical model of what the "Folding Armrest System" will look like. A digitized model the rear seat armrest and surrounding background in the form of a stp file will be provided from which a computer graphics program, hand rendering, physical model, or any combination of these can be used to develop the design. For those who don't have access to a computer graphics program or choose to submit hand renderings, an image of the rear passenger seat back with armrest folded down will be available as a

pdf file that can be printed and used as an underlay for a basis of the design. A submission of a physical model of the entire design or a portion of it submitted with a graphic design, in reduced scale is acceptable, *i.e.* wood, foam core, plaster, clay, 3D printer etc., but is to be no more than five pounds in total weight. *A written document of at least one page describing the thought process, evolution of the design, and/or a description of intent of the design must accompany the submission.*

Format and Presentation Requirements:

- After deciding what to include in the “rear seat armrest convenience system”, Items are to be positioned and packaged in a functional and attractive manner
- Only the face of the items in the design need to be shown, internal mechanisms need not be shown
- Entries should be done so that all of the unique features are easily seen and identified. This description can include partial views or views from different viewpoints to best describe the design
- The design itself must not include the name of the student, school, school logo or otherwise identify the student, school or school district.
- The submission *must* include a series of hand drawn (recommended) sketches or computer made images that show the evolution and development of the design. These drawings can be made on letter size sheets and attached to the required one page written document (refer to the next bullet point) *or* be included on the same sheet with the finished design.
- Entries must include at least a one page written description of the design process that was used in developing the concept or any research that was done. If done on a separate sheet, it must be firmly attached to the drawing. Note: the depiction and description of the development of the design is a critical factor in the judging of your entry.
- Final entries can be submitted as a hand drawing or rendering, computer graphics drawing, physical model or any combination of these. Models are not to exceed 5 pounds.
- All computer graphic and/or hand rendered entries are to be on a single sheet or display board and be no larger than 24 x 36 inches (D size). Folding display boards must be no larger than 24 x 36 when open.
- The entry **must** be identified with “the student information block” that is included with the Contest materials. The student information block is supplied under two file formats for your choosing. This “Student Information Block” is to be included or attached to the lower right hand corner of the sheet, or printed and attached to physical models. Enter the information requested including the student **proper** first and last name. *Please do not change the scale of the Block; 3.5” x 3.5” on the drawing. No other title block or identifier should be used.* Student and school information will be masked during judging.

Entries will be judged on:

- Creativity of the design

- Inclusion of the depiction and description of the development of the design
- Practicality of the design
- Supporting written documentation which describes key elements of the design
- Adherence to presentation requirements
- Quality of the written presentation, concept development images, and final drawing
- Decision of the judges is final
- **Teachers: To ensure you receive all the latest updates and reminders** for the 2022 Design Challenge, register now at www.asbeFoundation.org and download the *Design Challenge* materials.
- **Students: Register Early** Inform us of your interest to enter the Design Challenge Competition by registering on our website today. *All registrations must be received no later than Friday, April 8, 2022.* You must be registered to be eligible for the competition. Student registrations will be taken at www.asbefoundation.org where Design Challenge materials can be downloaded as well.
- **Due Date: Entries must be received on or before 3 pm Friday, April 8, 2022. Submissions can be mailed or delivered to:**
asbe Foundation Design Challenge
 Kendra Rosemeck
 Macomb Intermediate School District
 44001 Garfield Rd.
 Clinton Twp, MI 48038 eMail: krosemeck@misd.net

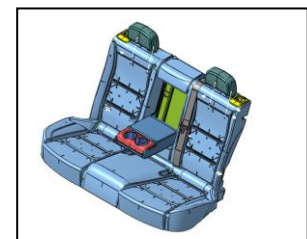
Student Design Checklist:

- Individual students must be Registered by April 8, 2022 on the *asbe* website to enter the Design Challenge Competition: www.asbeFoundation.org
- Carefully read and understand the requirements and parameters of the rear seat convenience system to be designed
- Entry must include a series of images that show the evolution of the design
- Include at least a one page document to describe your design, your thought process, research, or other supporting information
- Read and understand format, presentation and sheet size requirements
- Refer to the list of considerations concerning how your design will be judged
- Entry must have the *asbe* Student Information Block included digitally or attached to models, hand drawn renderings etc.
- Drawings must be submitted for judging on or before 3 pm Wednesday, April 8, 2022**

Awards Dinner: Winners of the Design Challenge and their teachers will be invited to attend the annual Awards Dinner celebration as our guests. This event will be held on Tuesday April 26, 2022. Photos of past winners and Awards Dinner speakers are posted on our website: www.asbefoundation.org/image-gallery

Awards Made for Each Category:

1 st place	\$400 + “Jennings Award” Plaque
2 nd place	\$300 + Certificate of Honor
3 rd place	\$200 + Certificate of Honor
4 th up to 8 th	\$100 + Certificate of Honor
Best in School	\$50 + Certificate of Merit



Questions and Assistance: DesignChallenge@asbeFoundation.org