Chapter 2 Assessment

Your design team will develop a safety system for protecting automobile, airplane, bicycle, motorcycle or train passengers. As you study existing safety systems, you and your design team should be listing ideas for improving an existing system or designing a new system for preventing accidents. You may also consider a system that will minimize the harm caused by accidents.

Your final product will be a working model or prototype of a safety system. On the day that you bring the final product to class, the teams will display them around the room while class members informally view them and discuss them with members of the design team. At this time, class members will generate questions about each others’ products. The questions will be placed in envelopes provided to each team by the teacher. The teacher will use some of these questions during the oral presentations on the next day. The product will be judged according to the following:

1. The quality of your safety feature enhancement and the working model or prototype.
2. The quality of a 5-minute oral report that should include:
   - the need for the system
   - the method used to develop the working model
   - demonstration of the working model
   - discussion of the physics concepts involved
   - description of the next-generation version of the system
   - answers to questions posed by the class
3. The quality of a written and/or multimedia report including:
   - the information from the oral report
   - documentation of the sources of expert information
   - discussion of consumer acceptance and market potential
   - discussion of the physics concepts applied in the design of the safety system

Criteria

Review the criteria that were agreed to at the beginning of the chapter. If they require modification, come to an agreement with the teacher and the class.

Your project should be judged by you and your design team according to the criteria before you display and share it with your class. Being able to judge the quality of your own work before you submit it is one of the skills that will make you a “treasured employee”!