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| **Description of the competition:**  Students design, build and race wooden cars powered by released CO2 gas. The vehicles will be designed and built using the following rules. Judging will be based on time trials, engineering design and construction (hand or CADD drawings), and written documentation. The vehicle with the top speed may not necessarily win. Shell cars, rail cars, and funny car designs will be raced against each other until the final round. During final round all body styles will be raced together. There will be only 3 winners. |
| **Rules of the competition:**   1. One individually produced car per student. 2. Students can utilize any tools or machines to build their cars. *CNC and handmade cars will be raced against each other.* 3. All cars should have a finish coat (dry prior to registration). 4. Students will not be allowed to tune or make repairs after registration. 5. Standard 8 gram CO2 cartridges will be supplied at race time. |
| **Material Requirements:**   1. One piece all wood construction. *NO fiberglass, aluminum, any material other than wood.* 2. No add-ons or wood glued together. 3. Paint and decals can be used as long as they are not considered body strengthens. 4. All vehicles must have 4 wheels, each of which must meet front and rear wheel regulations/dimensions. *Skis or slides not permitted.* 5. All wheels must be made entirely from plastic. Wheels may be either purchased or shop-made. 6. All wheels must roll and make contact with the race surface at all times. 7. A maximum of 8 spacer washers may be used. 8. A maximum of 8 axle clips may be used. 9. Axles and bushings can be of any material. 10. Lubricants can be used as long as remnants are not left on the track or people. |
| **Design Tolerances chart** |