

Egg-Car-Go

Purpose: To design and build a car from simple parts that will travel the greatest distance when released down an inclined ramp and then successfully race the car through three rounds of competition

Rules for Construction:

1. Each team is composed of 2 members.
2. All construction **must** be done at the Science Fair on the competition day (*See exception on 4a below*). Materials supplied by each team listed in #4 and #5 below **must** be checked in on the preceding day during registration time. Necessary supplies must be in a zip lock bag or container for overnight storage. No loose supplies or parts will be accepted. Only materials that meet specifications will be allowed. All others will be removed from the teams' materials.
3. Each team will be **given a package** of materials on **competition day**. The package includes:
 - a. 2 metal axles (each approximately 1/16th inches in diameter and 5.5 inches long)
 - b. 1 styrofoam egg carton, 12-egg capacity
 - c. 2 sticks of gum
 - d. 2 soda straws
 - e. a 3" X 5" card with the team number
4. Each team **must supply** the following materials:
 - a. Up to 4 devices which can be used as wheels; each device not to exceed 12/16th inch width (thick). Wheels may be pre-assembled.
These devices **must not** be originally made to be a wheel.
 - b. Scissors to be used during construction of the vehicle (if needed)
5. Each team **may supply** the following materials:
 - a. Lubricant for axles, if desired
 - b. Material to be used as extra mass for the car. (Must fit inside the egg carton with the lid closed.)
 - c. diagrams for construction guidelines
6. Each team will have 20 minutes to build the car and present it to the judges.
7. Total width of the assembled car must not **exceed 7 inches**.
8. No other adhesive material will be allowed than what is provided.
9. The team number must be placed on the "top" of the car/ egg carton.
10. **All supplies must be in a container for check-in.**
11. No notebook is necessary for this event.

Disclaimer: Angelina County Science & Technology Fair is not responsible for damage to stored supplies. Projects will be stored overnight in an open-air barn. Remember to pack accordingly.

The Racetrack:

1. The racetrack will consist of two parts, the ramp and the raceway. The lanes will be 7.5 inches wide, and divided with a 2 inches high barrier between the lanes and on the sides. Each lane has a maximum width of 7.5 inches.
2. The distance from the starting line to the end of the ramp will be 5 feet long and positioned at an incline. The front wheel of the car will be positioned over the starting line. The slope of the ramp will be adjustable so that for Round 1 the starting line will be 15 inches higher than the end of the ramp. Round 2 will have the starting height at 10 and 3/16ths inches, and for the final round it will be 5 and 2/16th inches in height.
3. The raceway will have the same width distances as the ramp, but will be set horizontally.

Rules for Racing:

The competition will consist of three rounds.

Round 1

- a. Racing will be conducted in flights of 6 teams in each flight.
- b. Teams will race in pairs with each car's success being judged on the distance traveled down a track. *Time will not be considered.
- c. The cars from different teams will be placed on the elevated ramp with the wheels set on the starting line. When the judge indicates, the cars will be released (with no accelerant other than gravity) and allowed to move down the ramp onto a raceway. When a car stops, the total distance traveled from the Starting Line to the contact point of the front wheel at the end of the run will be measured and recorded.
- d. After flight 1 (teams 1-6) is completed, each team will race a second time using the same format.
- e. Once all flights have competed the best distances of the two runs for each team is compared.
- f. The teams with the top twenty distances will advance to Round 2. In the event of a tie for the last position, all teams with that same distance will advance.

Round 2:

- a. Teams that advance to Round 2 will be divided into 5 flights
- b. All distances from Round 1 will be discarded.
- c. Racing will be conducted in the same manner as Round 1, except the angle of the ramp is changed **to 10 and 3/16ths inches from starting line to the floor.**
- d. The teams with the top 10 distances will advance to round 3. In the event of a tie for the 10th position, all teams with that distance will advance.

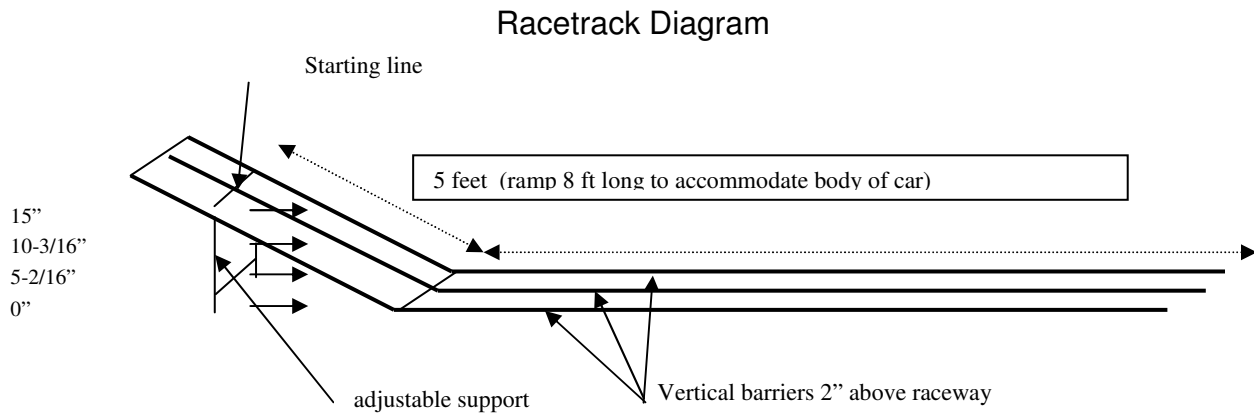
Round 3:

- a. Teams that advance to Round 3 will be divided into two flights.
- b. All previous distances are discarded.

- c. Racing will be conducted in the same format as Round 1 except the starting line height is **lowered to 5 and 2/16th inches above the floor.**
- d. After completion of this round, the team with the greatest distance traveled **in Round 3** will be the winning distance; 2nd Place will go to the second farthest, etc.... In the event of a tie for any placing, a dual match will be run between the two cars to determine who is before the other. (These extra distances cannot exceed their original placing, but only used to place the two.)

Disqualifications: If any of the above rules are violated, the entire team will be disqualified from the competition.

Note: After the completion of the competition all projects must be removed from the Expo Center. An area will be designated outside the Expo fence (near the flag poles) for late pickup of projects on the same day. Students are responsible for moving their projects to this area prior to leaving on the day of competition. Projects in this area will be disposed of if still present the morning following competition. Any projects left in the competition areas will be disposed of by the cleanup crew at the Expo Center immediately following the event. The Angelina County Science & Tech Fair, George H. Henderson, Jr. Exposition Center, and the Lufkin/Angelina County Chamber of Commerce are not responsible for any projects left outside for late pickup.



EGG-CAR-GO SCORE SHEET

Team # _____

Division: _____ Middle School (6-8 grade) Specify grade: _____

_____ High School (9-12) Specify grade: _____

Name of school: _____

Name(s) of participants: _____

		Total Point Value	Points Earned	Totals
Model (20 pts. Max)	Creativity of design	0-20 pts.		
			Total Points for Model	

		Total Point Value	Points Earned	Totals
Qualifying Rounds (35 pts. Max.)	Round 1 Qualification	10 pts		
	Round 2 Qualification	10 pts		
	Round 3 Qualification	15 pts		
			Total Qualifying Points	

Championship Heats (45 pts. max)	Greatest Distance	Total Point Value		
	1	45		
	2	40		
	3	35		
	4	30		
	5	25		
	6	20		
	7	15		
	8	10		
	9	5		
	10	1		
			Total Championship Heat Points	

TOTAL POINTS	
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