JetToy Competition

Event / Track Description & Scoring Guide
Distance

Objective: Student design teams will construct a JetToy car that can travel as far as possible.

➢ Track Specs: The track will be 10m long x 3m wide
➢ Teams must release JetToy behind the 0m mark
➢ JetToy must stay on track for attempts to be valid (if JetToy leaves the track, points are rewarded at point of exit)
➢ JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.

Scoring
✓ Design teams get three attempts.
✓ Final score is based on the average of the 3 attempts.
✓ Point total is awarded by judge determining the scoring box and adding the total cm travel in the point box.
✓ Measurements are taken from the furthest point of travel (i.e. most distant point), reference car front edge.

Distance Track –

<table>
<thead>
<tr>
<th>0m</th>
<th>1m</th>
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<th>6m</th>
<th>7m</th>
<th>8m</th>
<th>9m</th>
<th>10m</th>
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</thead>
<tbody>
<tr>
<td>0 points</td>
<td>1 point</td>
<td>2 points</td>
<td>3 points</td>
<td>4 points</td>
<td>5 points</td>
<td>6 points</td>
<td>7 points</td>
<td>8 points</td>
<td>9 points</td>
<td>10 points</td>
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</tbody>
</table>

The JetToy stopped 55cm beyond the 9m line, the point value of this trial is 9.55

Weight

Objective: Student design teams will construct a JetToy car that can carry a specific amount of weight.

- Track Specs 10m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid (if JetToy leaves the track, points are rewarded at point of exit)
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.
- Weights for the event will consist of 3 washers, taped in a cylindrical arrangement provided by Track Judges.

Scoring

- Design teams get three attempts.
- Final score is based on average of the 3 attempts.
- Point total is awarded by judge determining the scoring box and adding the total cm in the Point Box.
- Measurements are taken from the furthest point of travel (i.e. most distant point), reference-car front edge.

Weight Track –

<table>
<thead>
<tr>
<th>0 points</th>
<th>1 point</th>
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<th>3 points</th>
<th>4 points</th>
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<tbody>
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<td>0m</td>
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<td>2m</td>
<td>3m</td>
<td>4m</td>
<td>5m</td>
<td>6m</td>
<td>7m</td>
<td>8m</td>
<td>9m</td>
<td>10m</td>
</tr>
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</table>

The JetToy stopped 66cm beyond the 5m line, the point value of this trial is 5.66

Accuracy

Objective: Student design teams will construct a JetToy car that can travel a specific distance.
➢ Track Specs 10m long x 3m wide
➢ Teams must release JetToy behind the 0m mark
➢ JetToy must stay on track for attempt to be valid (if JetToy leaves the track, points are rewarded at point of exit)
➢ JetToy balloon must be inflated to maximum of 8 inch diameter or less.

Scoring
✓ Design teams get three attempts.
✓ Final score is based on the average the 3 attempts.
✓ Points awarded are by determining the scoring box and adding/subtracting the total cm traveled in the Point Box.
✓ Measurements are taken from the furthest point of travel (i.e. most distant point), reference-car front edge; if vehicle lands in target square the points are determined by square where 50% + of vehicle stops. Target square begins at 9.1 points; increases by a tenth of a point each 5 cm to center of target at 10 points; decreases by tenths beyond center.

Accuracy Track

<table>
<thead>
<tr>
<th>0 points</th>
<th>1 point</th>
<th>3 points</th>
<th>5 points</th>
<th>7 points</th>
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0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

e.g. Case-I : The JetToy stopped 68cm beyond the 3m line, the point value of this trial is 6.68 (red)
e.g. Case-II : The JetToy stopped 68cm beyond the 8m line, the point value of this trial is 6.32 (violet)

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Speed

Objective: Student design teams will construct a JetToy car that can travel as fast as possible over 3m distance.

- Track Specs 3m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid.
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.
- Track judge will time the teams attempt using a stopwatch / or by installing appropriate sensors.
  - Time starts when nozzle is released on the instruction of Judge.
  - Time stops when JetToy passes the 3m mark

Scoring
- Design teams will run 3 trails
- Final score is based on the Best of the 3 attempts, in case of sensors the indicated speed will be recorded.

The JetToy crosses the 3m line with the best time/speed among all participating is declared as category winner
Longest Travelling Time

**Objective:** Student design teams will construct a JetToy car that can travel for an extended period of time (longest travel time).

- Track Specs 10m long x 3m wide
- Teams must release JetToy behind the 0m mark
- JetToy must stay on track for attempt to be valid. The JetToy must be moving and be within the track to clock the maximum points.
- JetToy balloon must be inflated to maximum of 8 inch diameter or less. Track Judges will confirm the balloon diameter before JetToy is released.
- Track judge will time the teams attempt using a stopwatch or using sensors.
  - Time starts when the JetToy is released by the test engineer
  - Time stops when JetToy stops moving forward or leaves the confines of the track.

**Scoring**
- Design teams get three attempts.
- Final score is based on the average of the 3 attempts.
- For awarding refer the JetToy Rule Book.

<table>
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<th>Time Track</th>
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The JetToy stays on track and keeps moving for 15.23 sec., point value of the trial is 15.23.

- **Artistic Design**
  - **Objective:**
    Student design teams will construct a Concept toy that is functional and artistically designed.
  - **Scoring:**
    Overall competition will be evaluated by Jury panel to designate the JetToy they believe to be the best Artistic Design as well as on the Concept

- **Presentations**
  - **Objective:**
    Student design teams will present their JetToy design.
  - **Scoring**
    Presentations will be evaluated by a Jury panel for placement.

**Change History:**
- No change made with respect to 2018