A WORLD IN MOTION®

JetToy Competition

Event / Track Description & Scoring Guide

AWIM Development Board

SAEINDIA The Engineering Society for Advance Mobility Land Sea Air and Space

Distance

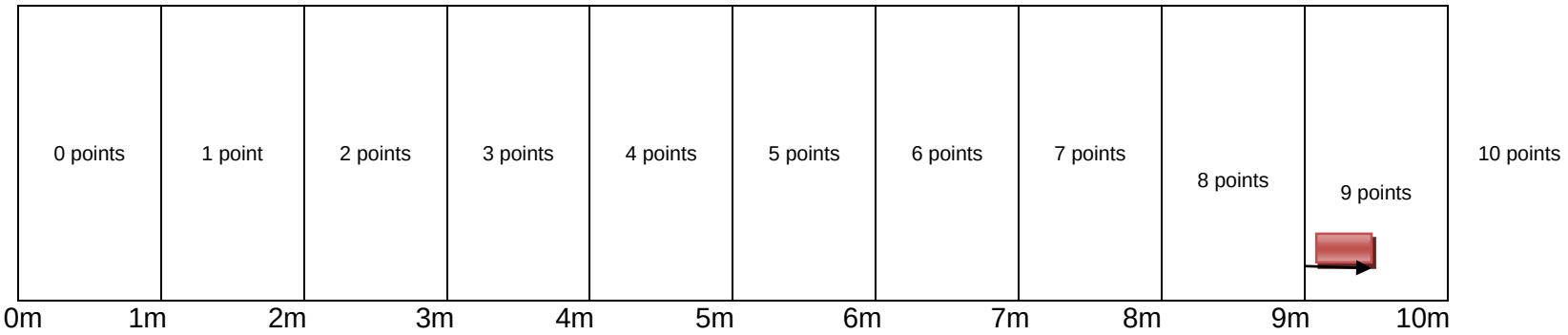
Objective: Student design teams will construct a JetToy car that can travel as far as possible.

- 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 –



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

Weight

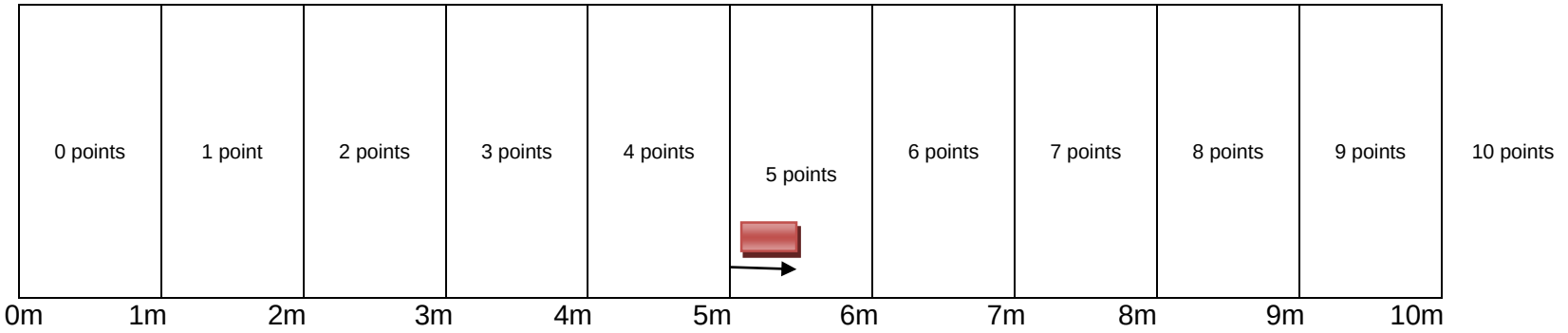
Objective: Student design teams will construct a JetToy car that can carry a specific amount of weight.

- 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 –



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.

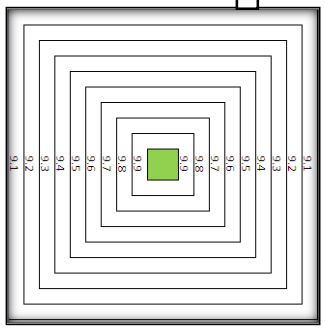
Scoring

- ✓ 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 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

0 points	1 point	3 points	5 points	7 points	8 points	7 points	5 points	3 points	1 point
0 points	2 points	4 points	6 points	8 points	Target 10 points	8 points	6 points	4 points	2 points
0 points	1 point	3 points	5 points	7 points	8 points	7 points	5 points	3 points	1 point

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



The JetToy stopped 68cm beyond the 3m line, the point value of this trial is 6.68

Speed

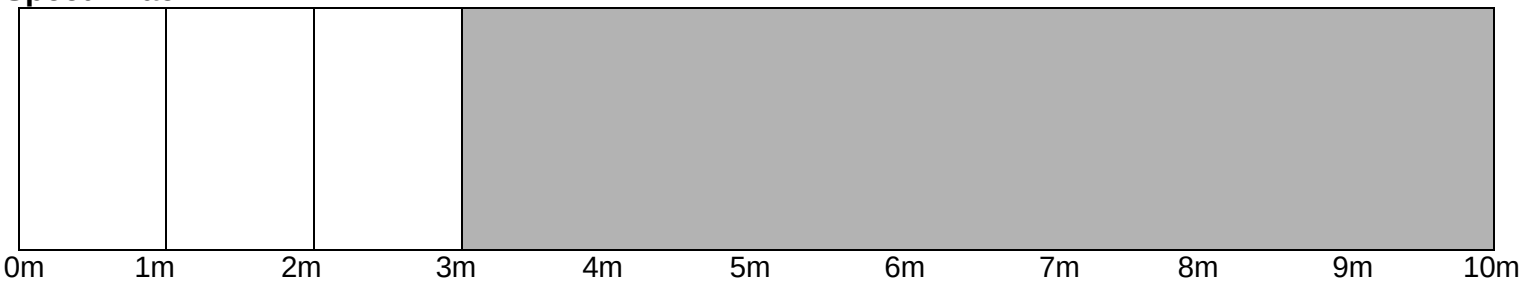
Objective: Student design teams will construct a JetToy car that can travel as fast as possible over 3m distance.

- 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).
- ✓ Team with the best time gets 10 points and the next best gets 09 points….. and so on.

Speed Track



The JetToy crosses the 3m line with the best time/speed among all participating teams gets 10 points, second best team gets 09 & so on.
(In case of teams more than 10 in numbers we go by percentage method)

* Points to be awarded to decide event winner & will not be considered in overall scores

Longest Travelling Time

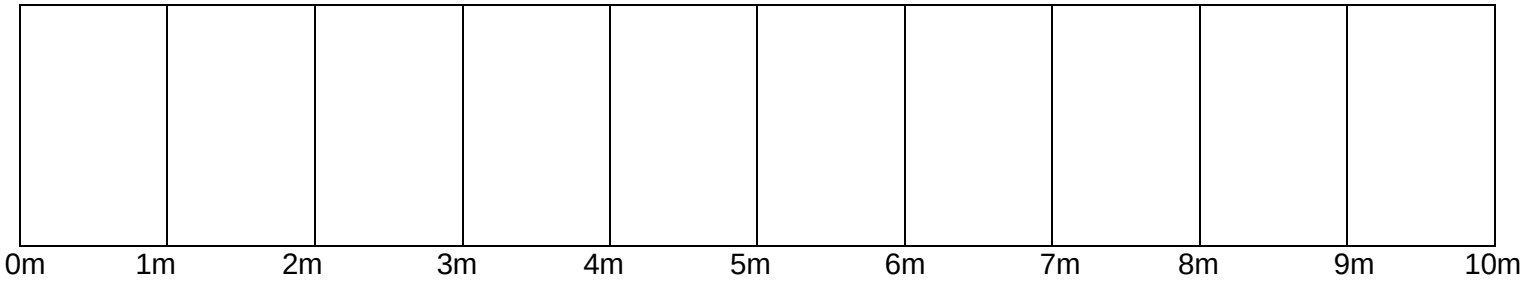
Objective: Student design teams will construct a JetToy car that can travel for an extended period of time (longest travel time).

- 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 (or exit track past 10m mark)
- 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
  - ✓ Time starts when nozzle is released
  - ✓ Time stops when JetToy stops moving forward or leaves the track.

Scoring

- ✓ Design teams get three attempts.
- ✓ Final score is based on the <u>average</u> of the 3 attempts.

Time Track



The JetToy stays on track and keeps moving for 32.34 sec., point value of the trial is 32.34

- **Artistic Design**

  - **Objective:**
    Student design teams will construct a JetToy 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.