



A WORLD IN MOTION

**Gravity Cruiser Track
Description & Scoring Guide**

Distance

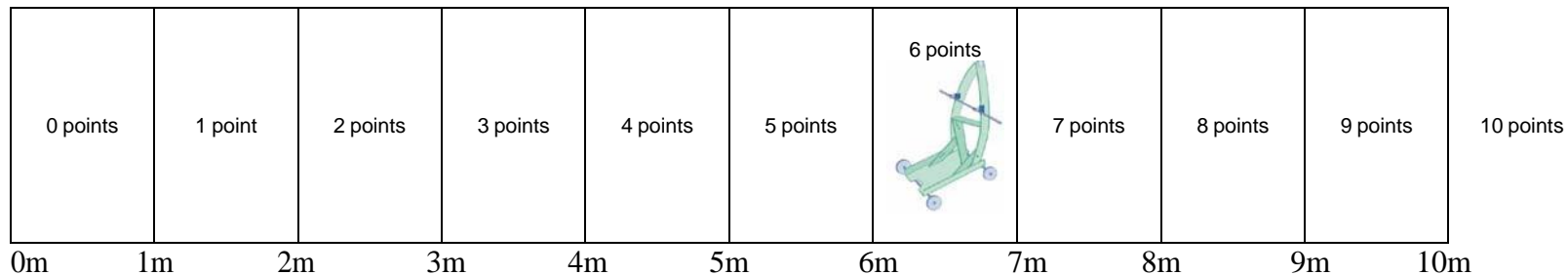
Objective: Student design teams will construct a Gravity Cruiser that can travel as far as possible.

- Track Specs 10m long x 3m wide
- Teams must release Gravity Cruiser behind the 0m mark
- Gravity Cruiser must stay on track for trial to be valid (if Gravity Cruiser leaves the track, points are awarded at point of exit)

Scoring

- Design teams get three trials.
- Final score is based on sum of the 3 trials.
- Point total is awarded by judge determining the scoring box where Gravity Cruiser comes to rest, measuring the centimeters from the last line that it crossed to the front of the cruiser and adding that decimal number to the score.

Distance Track



The Gravity Cruiser stopped 53 cm beyond the 6m line; the point value for this trial is 6.53.

Weight

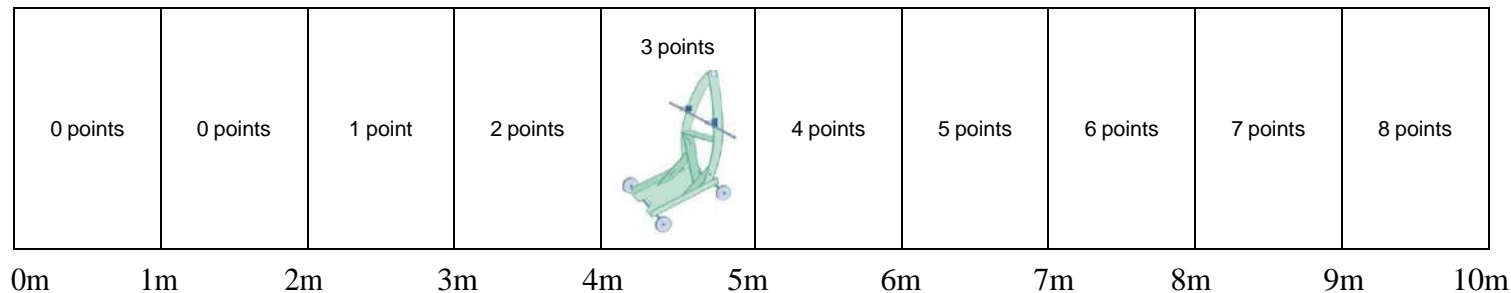
Objective: Student design teams will construct a Gravity Cruiser that can carry a specific amount of weight.

- Track Specs 10m long x 3m wide
- Teams must release Gravity Cruiser behind the 0m mark
- Gravity Cruiser must stay on track for trial to be valid (if Gravity Cruiser leaves the track, points are awarded at point of exit)
- 1 weight = 9 pennies in pack (25 grams) – must use weights provided by judges at starting line

Scoring

- Design teams get three trials.
- Final score is based on sum of the 3 trials.
- Point total is awarded by judge determining the scoring box where Gravity Cruiser comes to rest, measuring the centimeters from the last line that it crossed to the front of the cruiser and adding that decimal number to the score.

Weight Track - 1 weight



The Gravity Cruiser stopped 63 cm beyond the 4m line; the point value for this trial is 3.63

Accuracy


Objective: Student design teams will construct a Gravity Cruiser that can travel a specific distance.

- Track Specs 10m long x 3m wide
- Teams must release Gravity Cruiser behind the 0m mark
- Gravity Cruiser must stay on track for trial to be valid (if Gravity Cruiser leaves the track, points are awarded at point of exit)

Scoring

- Design teams get three trials.
- Final score is based on sum of the 3 trials.
- Point total is awarded by judge determining the scoring box where Gravity Cruiser comes to rest, measuring the centimeters from the last line that it crossed to the front of the cruiser and adding that decimal number to the score.

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	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		7m	8m	9m	10m

The Gravity Cruiser stopped 57 cm beyond the 4m line; the point value for this trial is 8.57.

The target values begin at 9.1 and increase by .1 each line; the center of the target is worth 10 points and decrease by .1 beyond the center.

Time

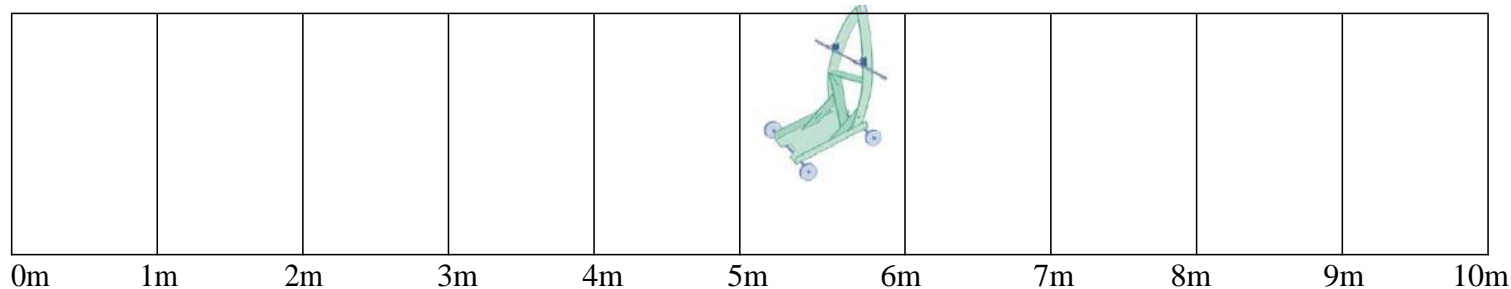
Objective: Student design teams will construct a Gravity Cruiser that can travel for an extended period of time.

- Track Specs 10m long x 3m wide
- Teams must release Gravity Cruiser behind the 0m mark
- Gravity Cruiser must stay on track for trial to be valid (or exit track past 10m mark)
- Track judge will time the teams' trials using a stopwatch
 - Time starts when Gravity Cruiser is released
 - Time stops when Gravity Cruiser forward momentum stops (Gravity Cruiser cannot stop and start.)

Scoring

- Design teams get three trials.
- Final score is based on the longest time of the 3 trials.

Time Track



The Gravity Cruiser stopped moving after 32.34 seconds. The point value for this trial is 32.34.