



# Skimmer Olympics Track Description & Scoring Guide



**AWIM Development Board**

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

## Skimmer Olympics - Track Descriptions & Scoring Guide



### Distance

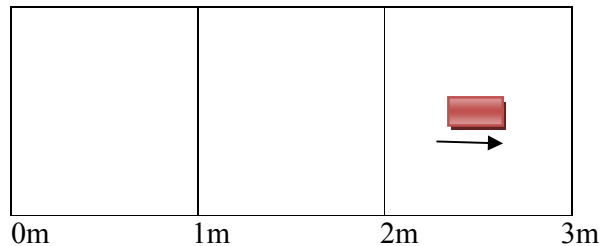
**Objective:** Student design teams will construct a Skimmer that can travel as far as possible.

- Track Specs 3m long x 2m wide
- Teams must release Skimmer from the Skimmer Dock that is located 30cm from the front of the fan
- Skimmer must stay on track for trial to be valid (if Skimmer leaves the track, points are rewarded at point of exit)
- Skimmer fan must be turned on high before Skimmer is released (The teams may decide to change the fan speed, however the fan speed MUST be the same for all tests/trials.)

### Scoring

- Design teams get three trials.
- Each trial distance will be measured by the judge using the measuring tapes along the sides of the track (nearest cm)
- Measurement is taken when the Skimmer stops for > 3 seconds
- If the Skimmer tips, the measurement is taken for the point where the tip begins
- Final score is based on average of the 3 trials.

### Distance Track :



The Skimmer stopped 50cm beyond the 2m line, the point value of this trial is  $(2.5 \times K) = 7.5$

Where  $K = 3$  (multiplying factor used during scoring)

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### Weight

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

- Track Specs 3m long x 2m wide
- Teams must release Skimmer from the Skimmer Dock that is located 30cm from the front of the fan
- Skimmer must stay on track for trial to be valid (if Skimmer leaves the track, points are rewarded at point of exit)
- Skimmer fan must be turned on high before Skimmer is released (The class/group may decide to change the fan speed, however the fan speed MUST be the same for all tests/trails.)
- Skimmer weight = pennies (Group 1 = 2 washers, Group 2 = 4 washers)

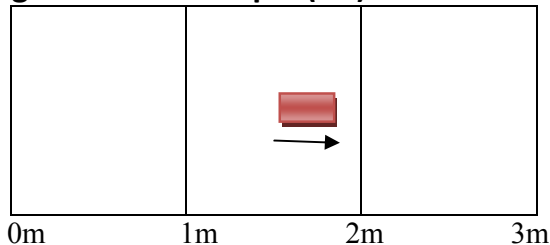
### Scoring

- Design teams get three trials.
- Each trial distance will be measured by the judge using the meas. tapes along the sides of the track (nearest cm)
- Measurement is taken when the Skimmer stops for > 3 seconds
- If the Skimmer tips, the measurement is taken for the point where the tip begins
- Final score is based on average of the 3 trials.
- Skimmer weight = pennies

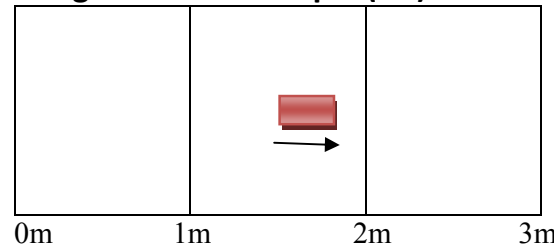
Group 1 = 2 washers – score is measured in distance (cm)

Group 2 = 4 washers – score is measured in distance (cm) x 2

#### Weight Track – Group 1 (G1)



#### Weight Track – Group 2 (G2)



**G1** : The Skimmer stopped 80cm beyond the 1m line, the point value of this trial is  $(1.8 \times K) = 5.4$   
Where  $K = 3$  (multiplying factor used during scoring)

**G2** : The Skimmer stopped 80cm beyond the 1m line, the point value of this trial is  $(1.8 \times K) \times 2 = 10.8$   
Where  $K = 3$  (multiplying factor used during scoring)

## Skimmer Olympics - Track Descriptions & Scoring Guide



### Accuracy


**Objective:** Student design teams will construct a Skimmer that can travel a specific distance.

- Track Specs 3m long x 2m wide
- Teams must release Skimmer from the Skimmer Dock that is located 30cm from the front of the fan
- Skimmer must stay on track for trial to be valid (if Skimmer leaves the track, points are rewarded at point of exit)
- Skimmer fan must be turned on high before Skimmer is released (The class/group may decide to change the fan speed, however the fan speed MUST be the same for all tests/trails.)

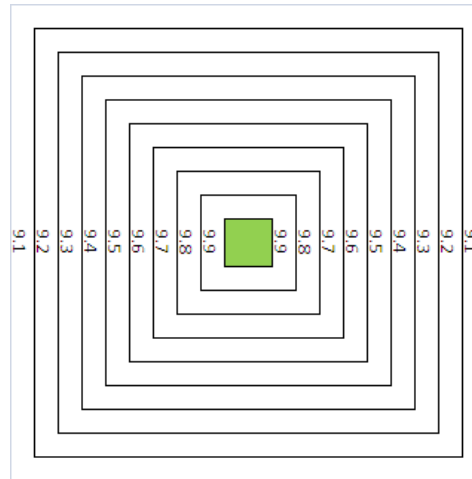
### Scoring

- Design teams get three trials.
- Final score is based on average of the 3 trials.
- Point are awarded 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-Skimmer front edge; if Skimmer lands in target square the points are determined by square where 50% + of Skimmer stops - target square begins at 9.1 points; increases by a tenth of a point, target at 10 points; decreases by tenths beyond center.

### Accuracy Track :

0 Point	4 Points	9 Points
2 Points	5 Pts 	10 Points
0 Point	4 Points	9 Points

0m                      1m                      2m                      3m



If the skimmer stops anywhere in the block, the team gets full marks as defined for the block

# Skimmer Olympics - Track Descriptions & Scoring Guide



## Turn


**Objective:** Student design teams will construct a Skimmer that can turn left or right at a specific distance.

- Track Specs 3m long x 2m wide
- Teams must release Skimmer from the Skimmer Dock that is located 30cm from the front of the fan
- Skimmer must stay on track for trial to be valid (if Skimmer leaves the track, points are rewarded at point of exit)
- Skimmer fan must be turned on high before Skimmer is released (The class/group may decide to change the fan speed, however the fan speed MUST be the same for all tests/trails.)

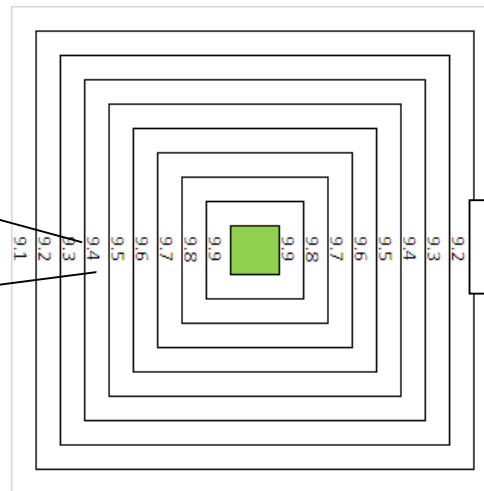
## Scoring

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

## Turn Track :

2 Points	10 Points	5 Points
0 Points	1 Pt 	2 Points
2 Point	10 Points	5 Points

0m                      1m                      2m                      3m



If the skimmer stops anywhere in the block, the team gets full marks as defined for the block

## Skimmer Olympics - Track Descriptions & Scoring Guide



### Speed

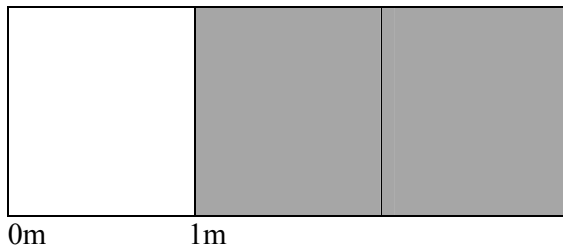
**Objective:** Student design teams will construct a Skimmer that can travel as fast as possible over a 1m distance.

- Track Specs 1m long x 1m wide
- Teams must release Skimmer from the Skimmer Dock that is located 30cm from the front of the fan
- Skimmer must stay on track for trial to be valid (if Skimmer leaves the track, points are rewarded at point of exit)
- Skimmer fan must be turned on high before Skimmer is released (The class/group may decide to change the fan speed, however the fan speed MUST be the same for all tests/trails.)
- Track judge will time the teams' trials using a stopwatch
  - Time starts when Skimmer is released
  - Time stops when Skimmer passes the 2m mark

### Scoring

- Design teams get will get 10 minutes to run 3 trails
- Final score is based on the best of 3 trials (judges will round times to 1 significant figure).

### Speed Track :



The Skimmer crosses the 1m line with the best time/speed among all participating teams gets 24 points, second best team gets 23 & so on. (In case of teams more than 24 in numbers we go by percentage method)