



A WORLD IN MOTION

**Skimmer Track Description &  
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 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.
- 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 sum of the 3 trials.

### Distance Track



## Weight

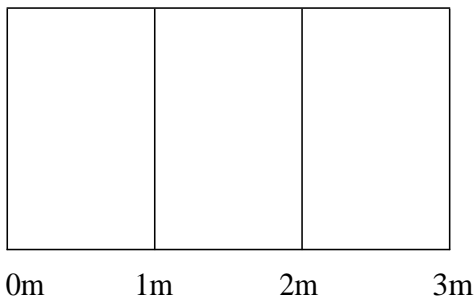
**Objective:** Student design teams will construct a Skimmer that can carry a specific amount of weight.

- 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 = 5 pennies
  - Group 2 = 10 pennies

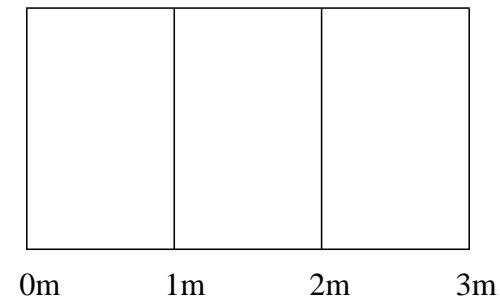
### Scoring:

- 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 sum of the 3 trials.
- Skimmer weight = pennies
  - Group 1 = 5 pennies – score is measured in distance (cm)
  - Group 2 = 10 pennies – score is measured in distance (cm) x 2

### Weight Track – Group 1



### Weight Track – Group 2



## 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 sum of the 3 trials.

### Accuracy Track

|          |          |           |    |
|----------|----------|-----------|----|
| 0 points | 4 points | 9 points  |    |
| 2 points | 5 points | 10 points |    |
| 0 points | 4 points | 9 points  |    |
| 0m       | 1m       | 2m        | 3m |

## 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 sum of the 3 trials.

### Turn Track

|          |           |          |    |
|----------|-----------|----------|----|
| 2 points | 10 points | 5 points |    |
| 0 points | 1 points  | 2 points |    |
| 2 points | 10 points | 5 points |    |
| 0m       | 1m        | 2m       | 3m |

## Speed

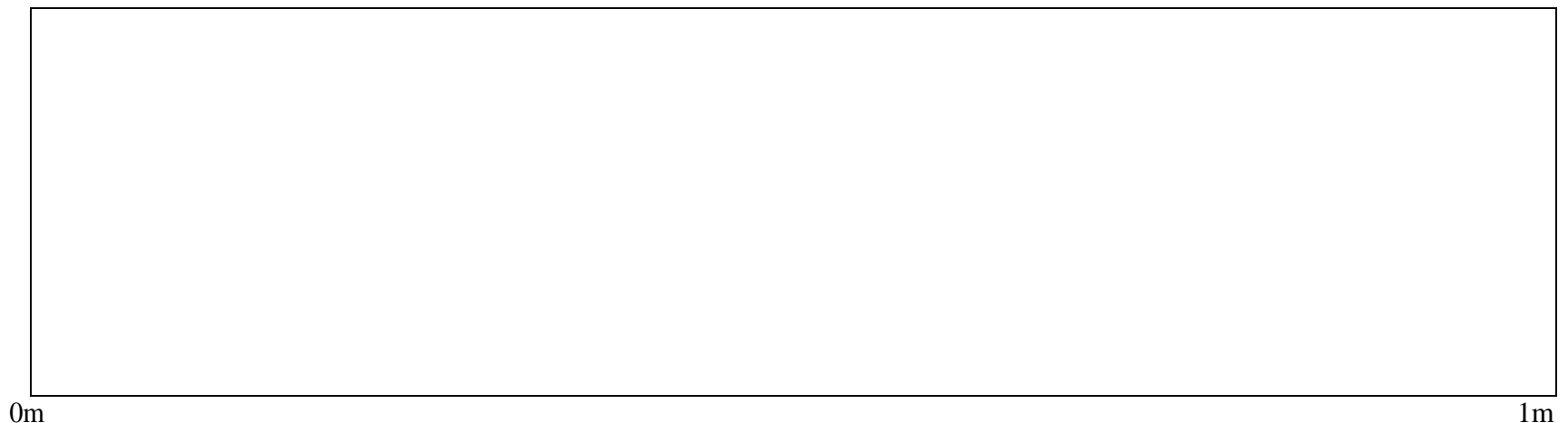
**Objective:** Student design teams will construct a Skimmer that can travel as fast as possible over a 1m distance.

- 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



## Artistic Design

**Objective:** Student design teams will construct a Skimmer that is functional and artistically designed.

**Scoring:**

- Students will vote (secret ballot) on a group to represent their class in the overall competition.
- Overall competition will be judged by mentors & teachers voting on the Skimmer they believe to be the best Artistic Design.

## Design Logs (see Skimmer Design Log Evaluation)

**Objective:** Student design teams will organize the process that they completed in order to design their Skimmer.

**Scoring:**

- Mentors/teachers will judge student design logs using the Design Log Evaluation in the classroom.
- Mentors will choose the best Design Log to represent the class in the overall competition
- Class representative Design Log will be evaluated by a panel of judges for placement

## Presentations

**Objective:** Student design teams will present their Skimmer design.

**Scoring:**

- Mentors/teachers will judge student presentations using the Design Team Presentation Rubric in the classroom.
- Mentors will choose the best presentation to represent the class in the overall competition
- Class representative presentations will be evaluated by a panel of judges for placement