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

<table>
<thead>
<tr>
<th>0m</th>
<th>1m</th>
<th>2m</th>
<th>3m</th>
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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 = 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
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

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

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

<table>
<thead>
<tr>
<th></th>
<th>0m</th>
<th>1m</th>
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</thead>
<tbody>
<tr>
<td>0 points</td>
<td>2 points</td>
<td>10 points</td>
<td>5 points</td>
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<tr>
<td>1 points</td>
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<td>2 points</td>
<td>2 points</td>
<td>10 points</td>
<td>5 points</td>
<td></td>
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</tbody>
</table>
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 trials
  - Final score is based on the best of 3 trials (judges will round times to 1 significant figure).

Speed Track

[Diagram of 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.