Environmental Systems and Societies Name:

*Madagascar Derby*

* **Learning Goal:** You will understand the difference between a qualitative and a quantitative observation. You will gain an understanding of how to determine cockroach velocity.
* **Success Criteria:** You will create a list of qualitative and quantitative observations about a Madagascar hissing cockroach. You will also devise a method for measuring how fast they move.

**What to do**:

1. Formulate your group.
2. Observe your cockroach, in your science notebook write down a list of observations.
3. Reread your list and rewrite it (On a separate sheet of paper) as three lists: 1) Qualitative observations, 2) Quantitative observations and 3) Inferences.
4. Develop a way to measure how fast your cockroach moves.
   1. Remember velocity is distance divided by time so…
      1. You need a way to measure distance.
      2. You need a way to measure time.
   2. You need a way to try to direct your cockroach.

**Safety:**

1. Madagascar Hissing Cockroaches do not bite or sting.
2. But they are fast and you need to be ready for them to scamper over you. They can get away from you so be careful.
3. You can hurt them by grabbing them too hard or hitting them with something, so be careful.
4. They are not like German cockroaches we are familiar with running the halls of Central. They cost about 15 dollars each.
5. When you put them back in their holding tank you need to wash your hands with soap for 30 seconds.

**What to turn in:**

1. Your paper with the three list.
2. A diagram of your cockroach racetrack
3. The calculations of the cockroach’s velocity
4. A one paragraph description of the cockroach’s behavior during the time trial.